

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 60
No. 14

ESTABLISHED 1882

\$4.00 Per Year
Single Copy 15 Cents

THE REASON FOR THE FAITH THAT IS IN US

Farms and Plantations of the United States will yield this year

2,769,348,000 bushels of corn
873,641,000 bushels of oats
655,516,000 bushels of wheat
278,552,000 bushels of potatoes
145,951,000 bushels of barley
30,677,000 bushels of rye
22,600,000 bushels of rice
15,670,000 bushels of buckwheat
715,543,000 pounds of tobacco
46,969,000 tons of hay
Between 13,000,000 and 13,500,000 bales of cotton

Marketing these crops and others and handling \$2,500,000,000 worth of products of Mines and Forests, as a basis for Manufacturing, Trade and Commerce, mean employment for 245,000 miles of Railroads and for financial institutions, among which the National Banks have

\$10,379,439,384, resources
\$ 5,489,995,012, individual deposits
\$ 1,929,875,822, capital, surplus and undivided profits

These facts should lead the country to make its text—"Work; Not Worry and Wrangle," and to live up to the text.

Alphabetical Index, Page 122.
Classified Index, Pages 116 to 121.
Classified Opportunities, Pages 78, 79 and 80.

BALTIMORE, OCTOBER 12, 1911



B. t. u. THE MEASURE OF HEAT

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal.

As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u.'s. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power.

Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

SUBSTANCE	B. t. u. Per Lb.	
Acetylene Gas	21,465	
Marsh Gas	23,515	Included in the "Volatile Matter"
Olefiant Gas	21,345	of proximate analysis.
Hydrogen Gas	62,035	
Carbon	14,450	"Fixed Carbon" of proximate analysis.

CLINCHFIELD COAL IS HIGH IN HEAT VALUE

Clinchfield coal is rich in Hydrogen and the Hydro-Carbon gases shown above. These "VOLATILE" gases burn above the fuel bed with rapidity and great intensity in close proximity to the boiler surfaces. Quick liberation of heat units means quick generation of steam; hence the economy in using Clinchfield coal which maintains boilers at high capacity easily and continuously, thus delivering more than the rated horse-power. Clinchfield coal ranges from 14,000 to 14,700 heat units per pound, because it contains small percentages of oxygen, moisture and ash, which are valueless, and large percentages of the combustibles highest in heat value.

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2,000,000 Tons Per Annum, and Growing

CLINCHFIELD FUEL COMPANY

Selling Agent

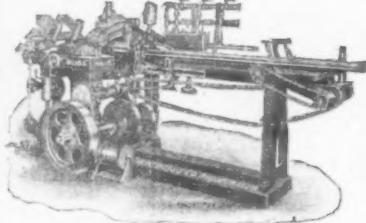
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Send for Metal sample plate.
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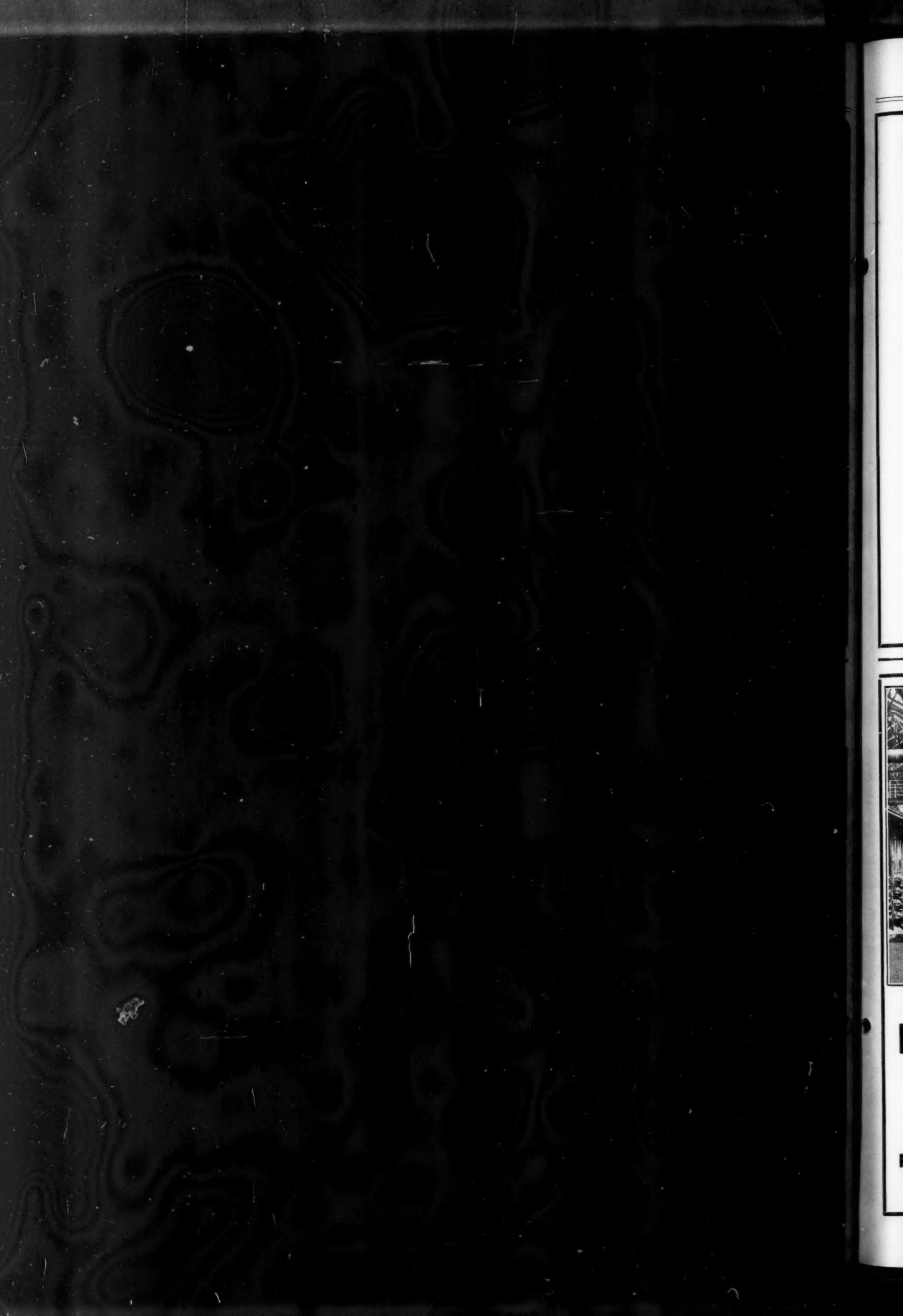
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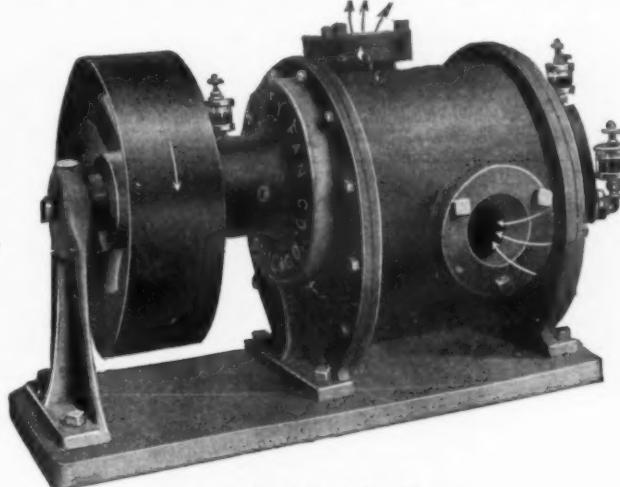
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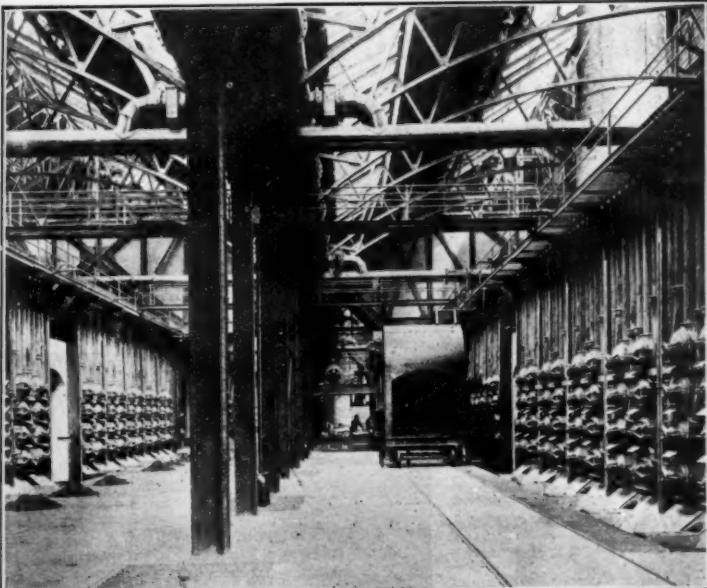
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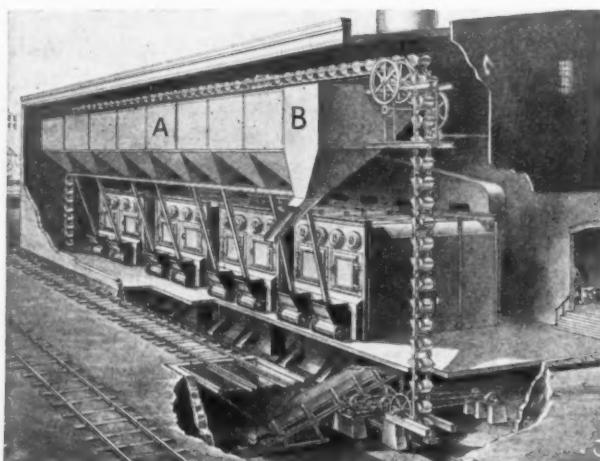
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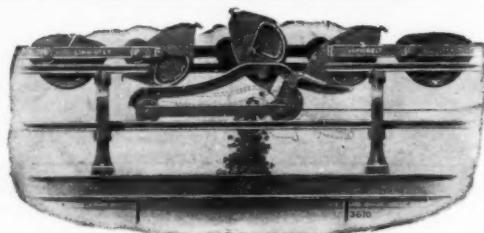
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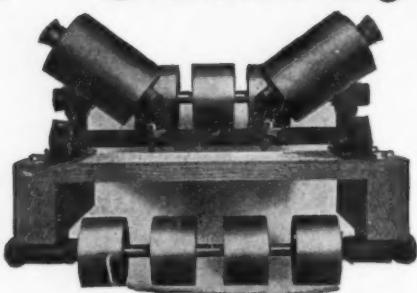
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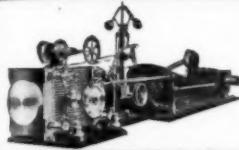
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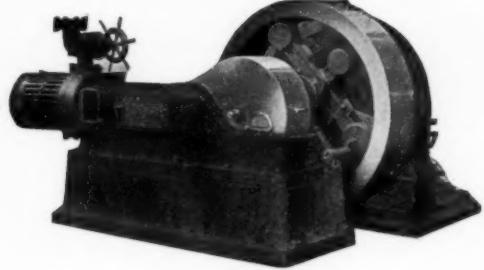
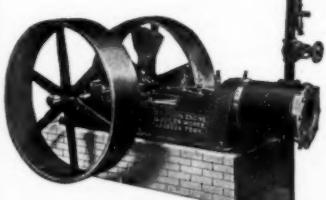


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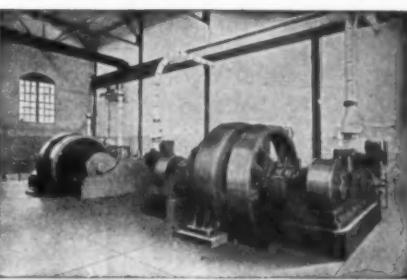


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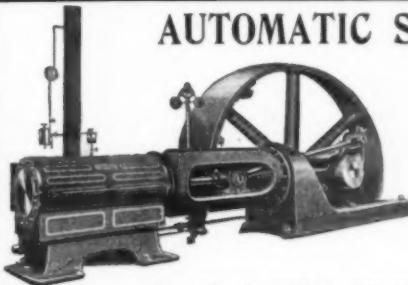


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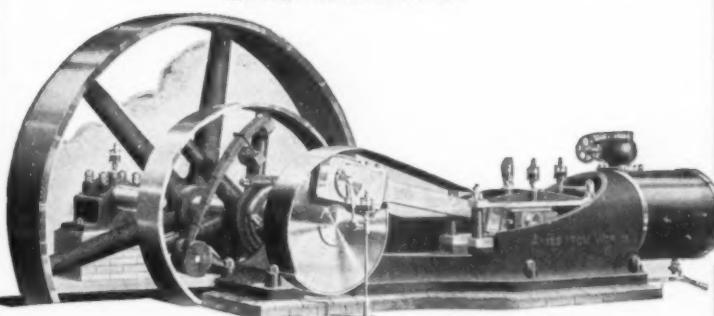
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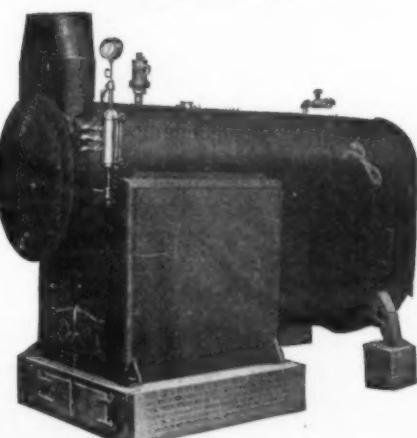
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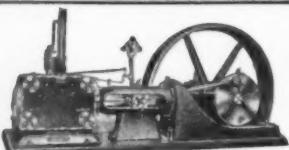


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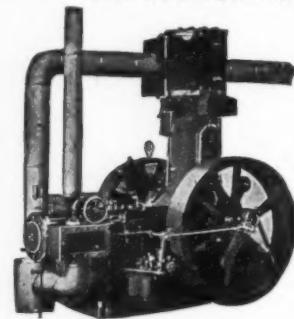
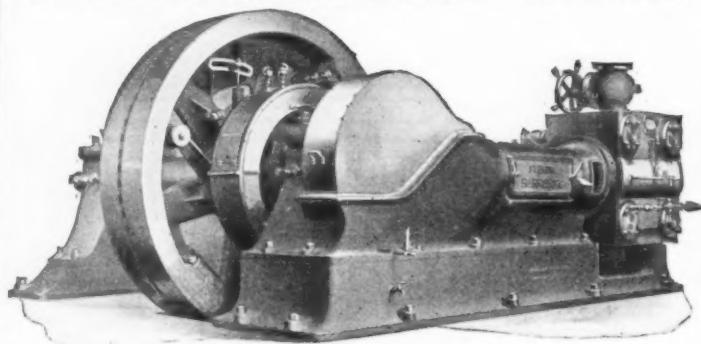
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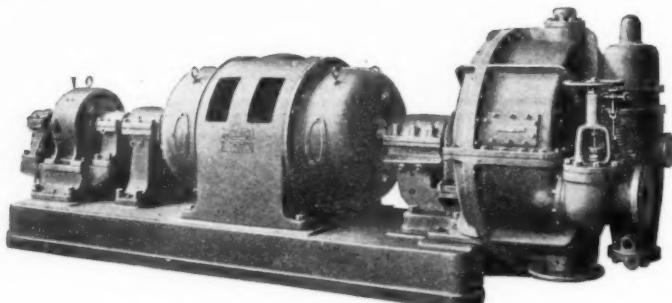
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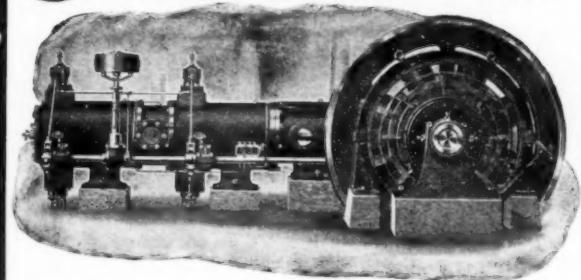
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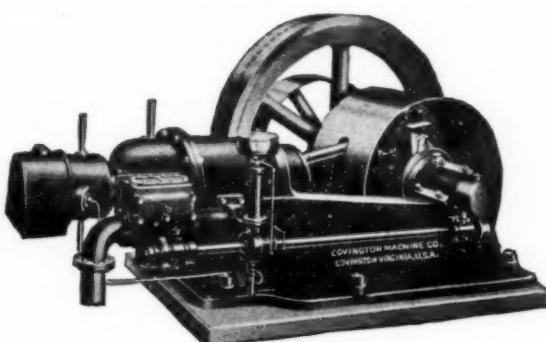
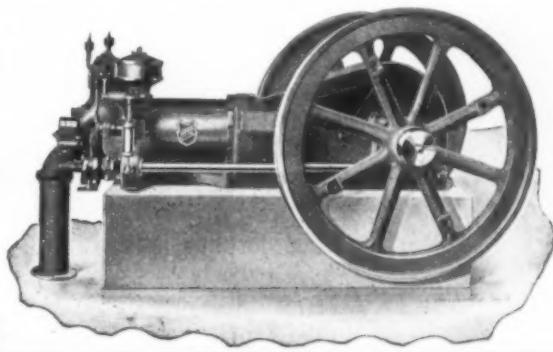
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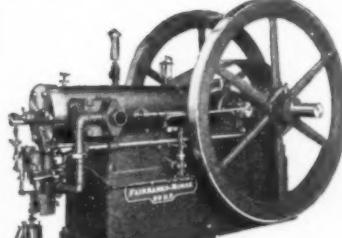
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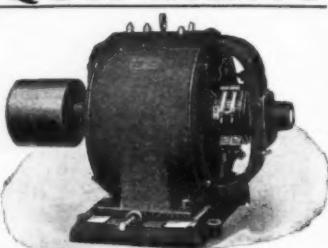
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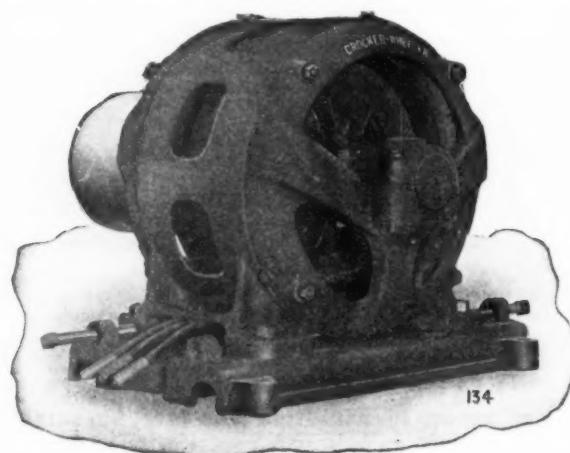
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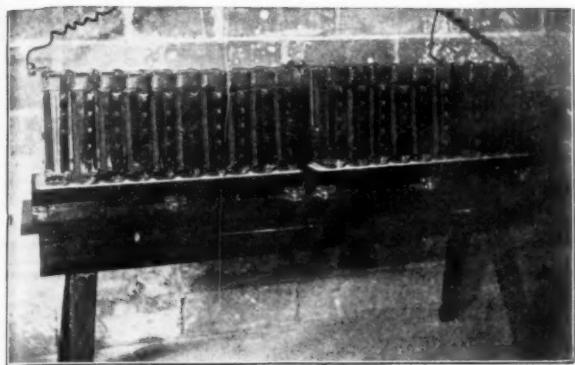
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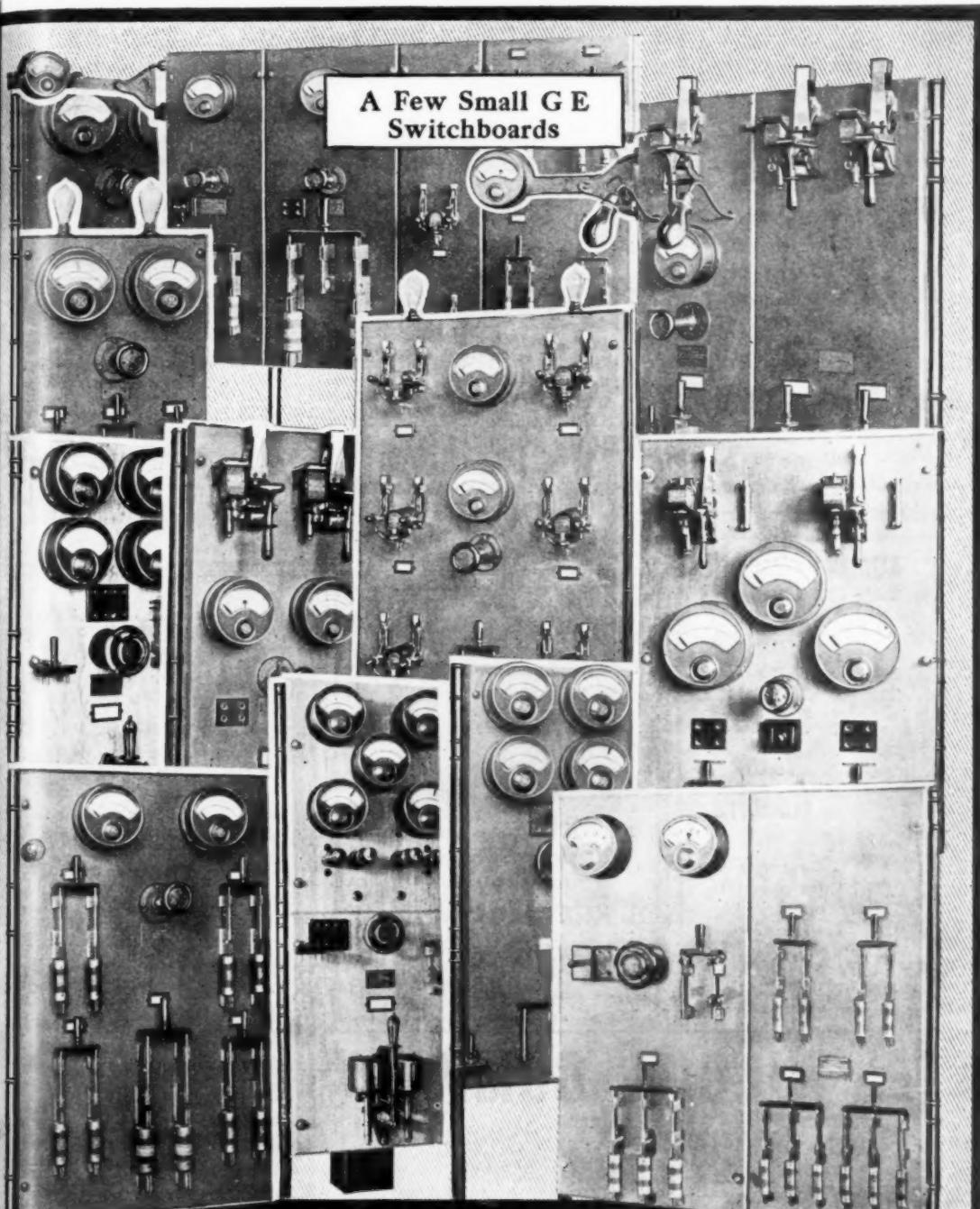
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explosion if not STEAM thorough in-
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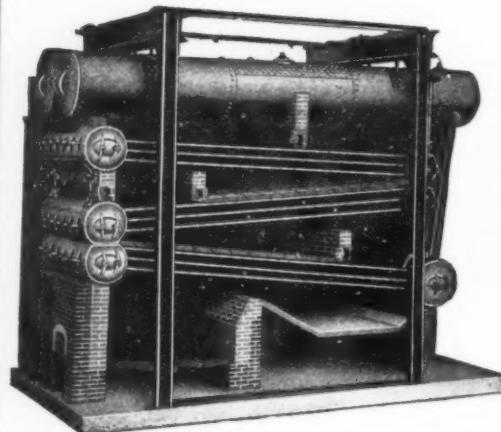
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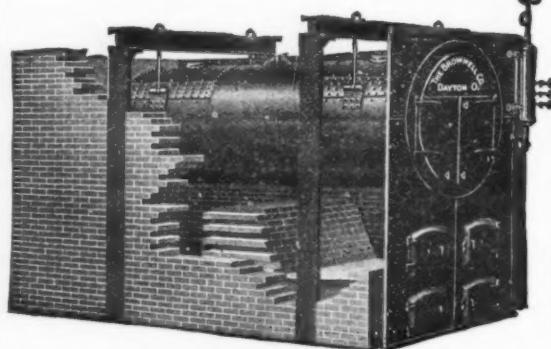
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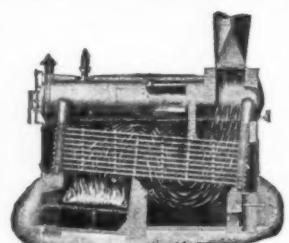
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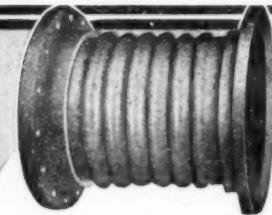
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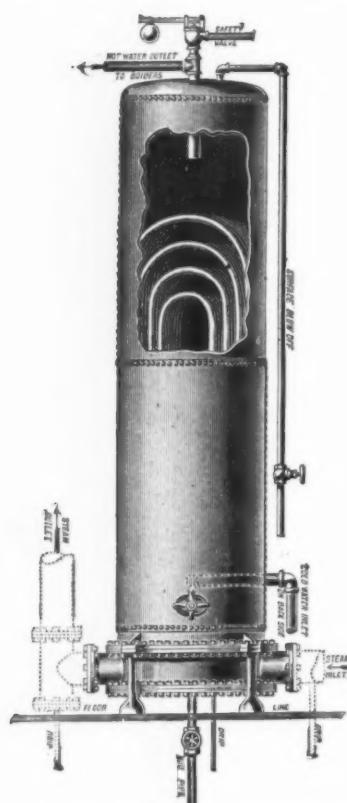
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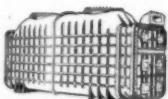
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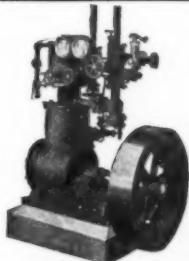
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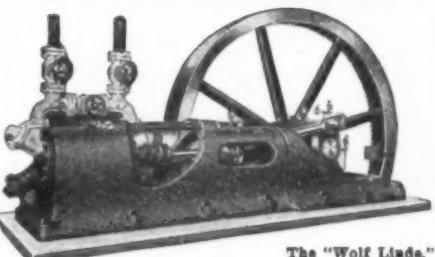
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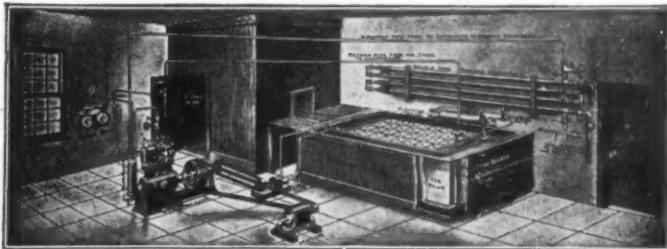
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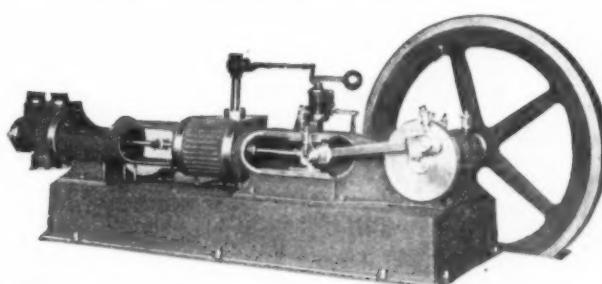


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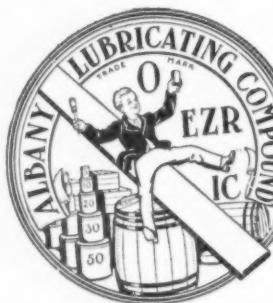
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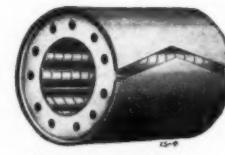
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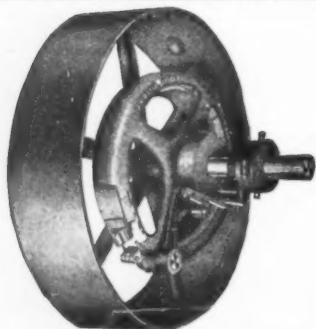
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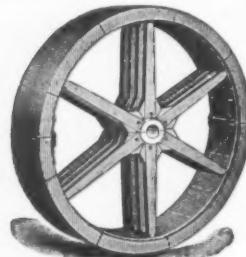
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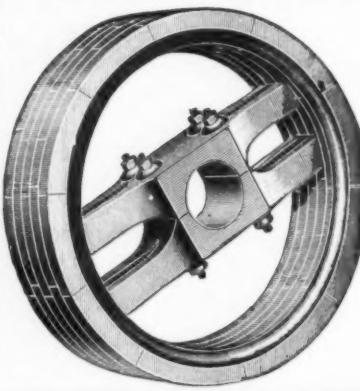
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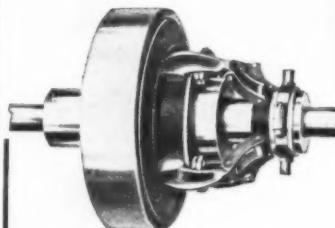
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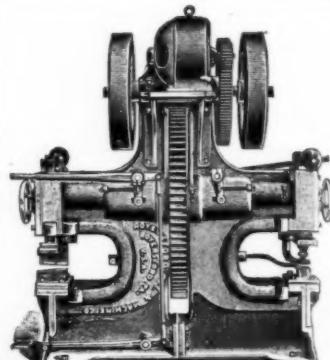
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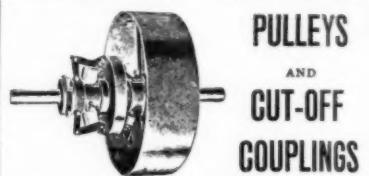


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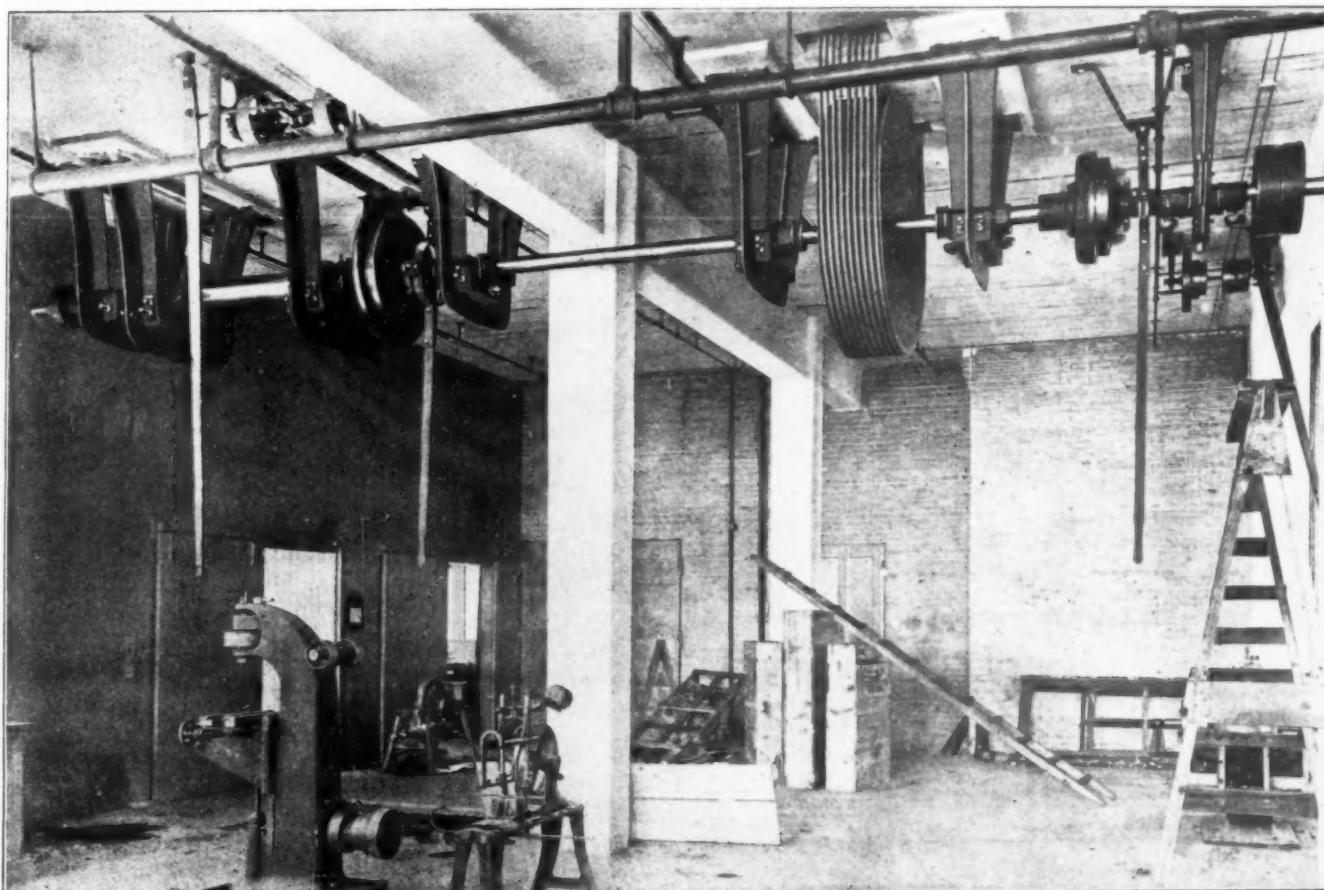
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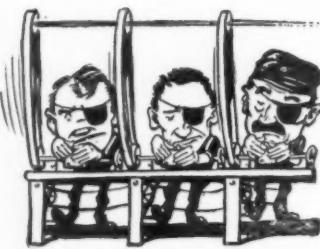
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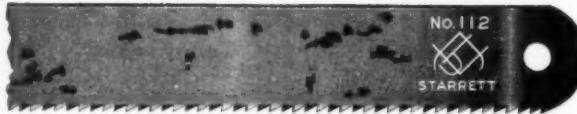
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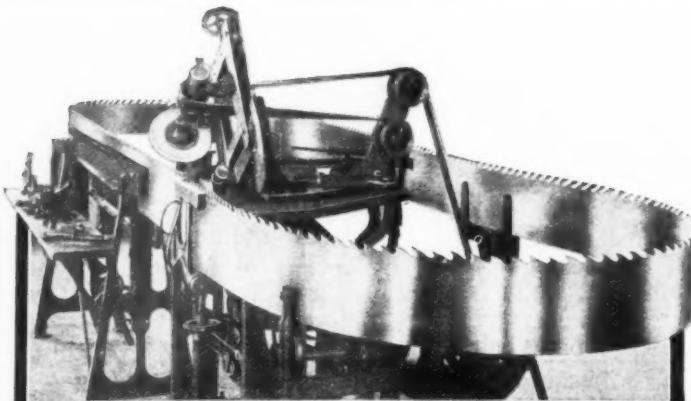
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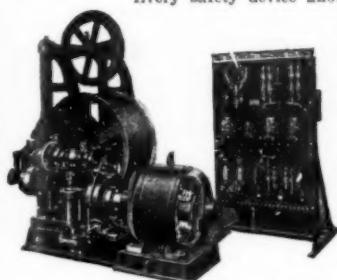
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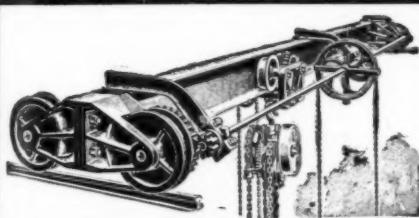
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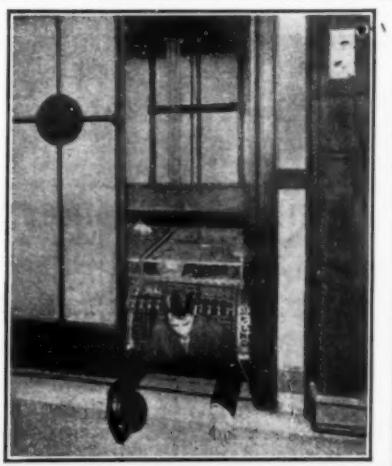
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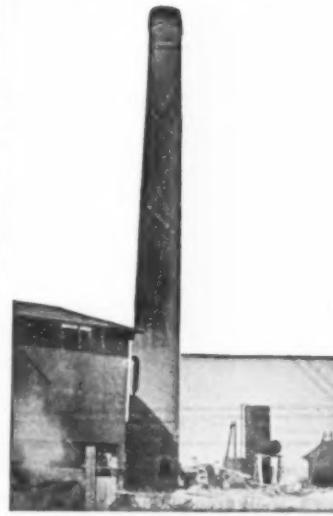
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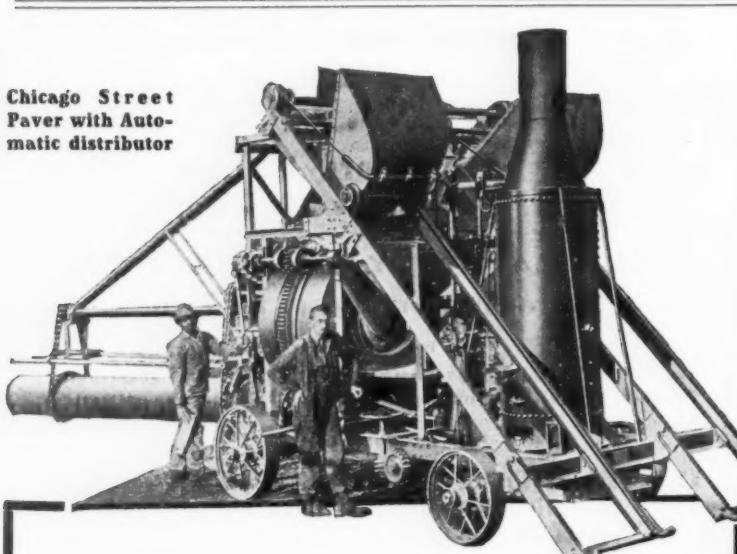
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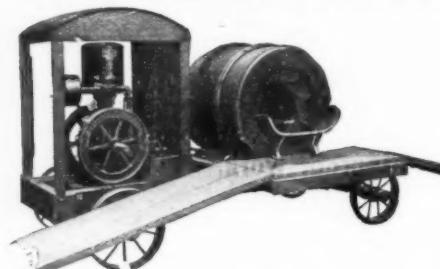
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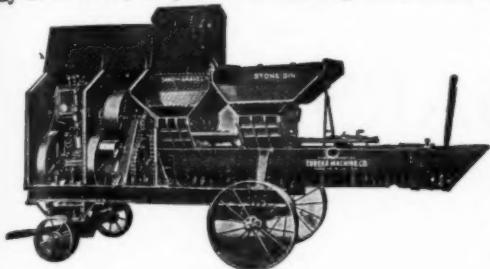
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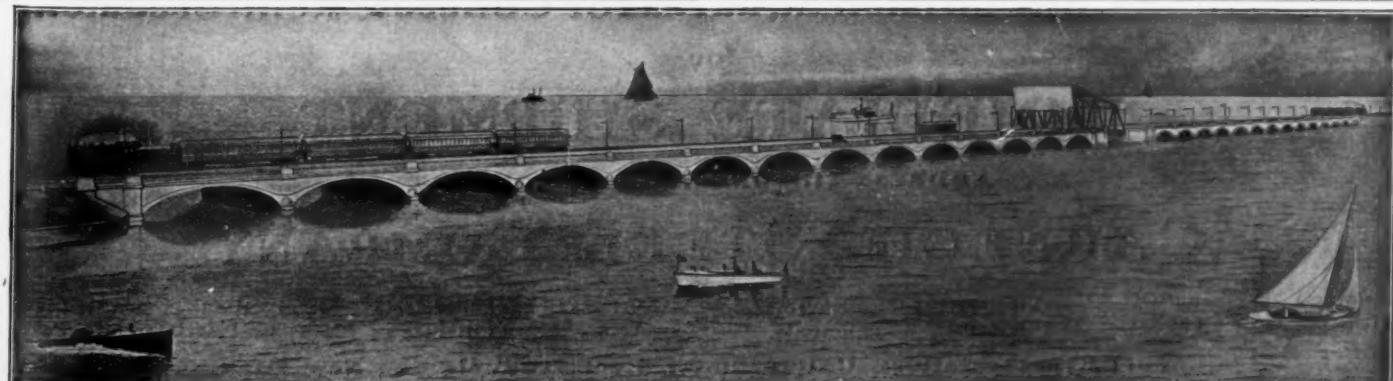
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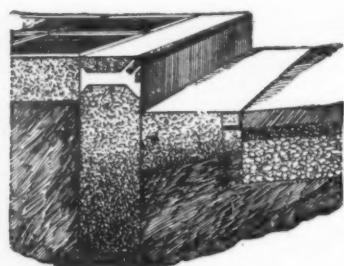
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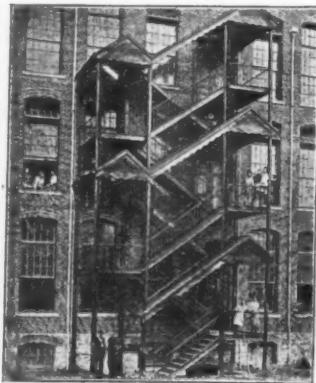
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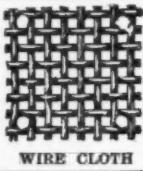
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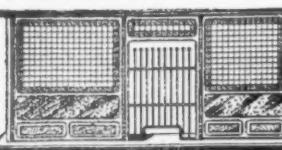
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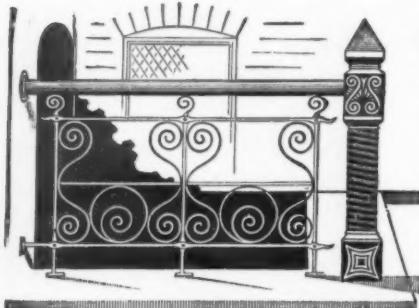
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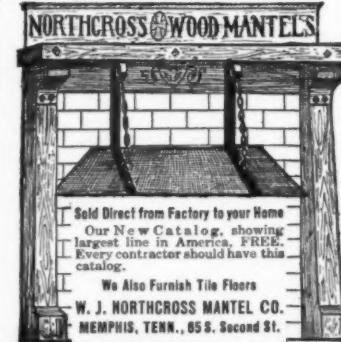
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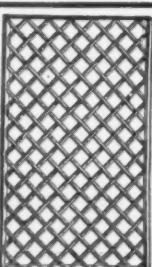
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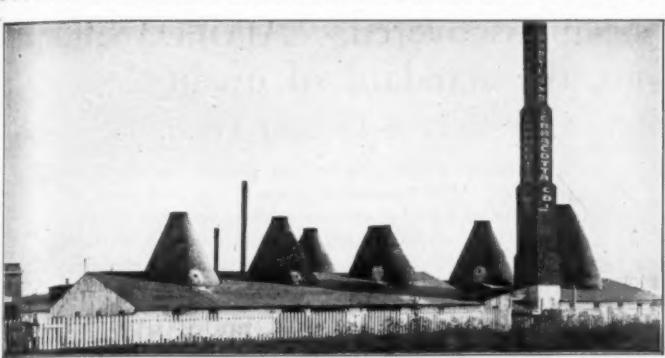
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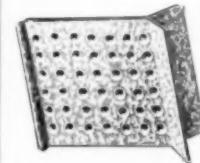
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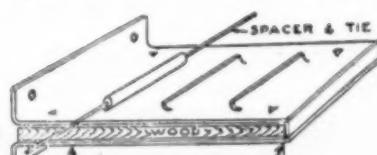
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Apollo Sheets are always uniform, soft, pliable, true to gauge, and easily formed. The superiority of Apollo has made these sheets favorites with particular sheet metal workers everywhere. Gauges 10 to 30. Write nearest District Sales Office for full information and quotations on Sheet and Tin Mill Products of every description.

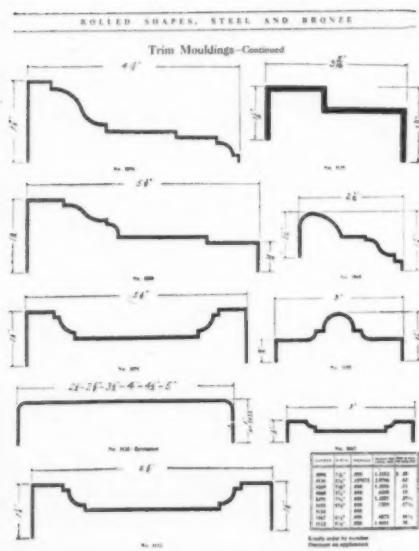
American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

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Iron contractors, steel car builders, metal furniture manufacturers, stair builders, Ornamental Iron Work Makers and others who hold to fireproof construction in their output, have need for metal trim and mouldings with which to carry out artistic and effective designs.

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Write for catalog No. B105—it contains a good many of our designs in full size profiles, together with tables and prices.

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SUCCESSOR TO JOHN W. RAPP CO. AND J. F. BLANCHARD CO.

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They are made differently by a different and exclusive process. They must be either better or worse than other galvanized sheets, and the people who have used them say they are better. That verdict satisfies us that we were right in discontinuing our old style galvanizing.

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We think you would like these sheets—most people who try them do.

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Texene gives a free flowing varnish free from bloom. It is clean, safe and odorless. It costs considerably less than turpentine.

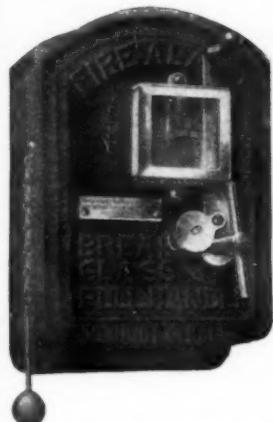
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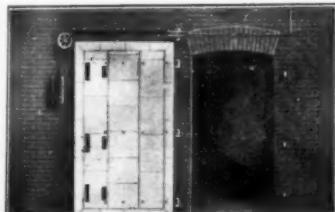
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See that Peters' Approved Hardware is used on your fire-doors. Closes doors automatically at the right time. Unfailing and up-to-date. Let us tell you some of the buildings we've equipped. Send for printed matter.

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is absolutely the strongest, best and easiest to install.

Originated and patented by us.

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LARGEST AND BEST LINE IN THE WORLD

"NEW CENTURY" Our well known, standard metal shingle, now covering more than 250 acres of roofs. A style that harmonizes with any style of architecture.

"DORIC" A new pattern, made after the chaste but strong lines of Grecian architecture. Very popular with architects and builders who prefer simplicity of design.

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Our Metal Shingles are *waterproof, fireproof and trouble proof*. Easily and quickly laid. Make the best safest most satisfactory and economical roof for residences, churches, school houses and all public buildings.

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So wrote E. S. Hessler, merchant of Warnerville, Pa., after eight years' use of a Monitor Boiler No. 7.

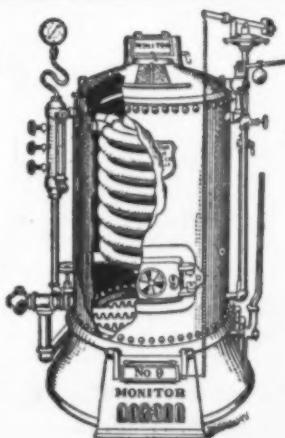
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Many industries in the South—Hot Springs Hotel Company, Hot Springs, Va.; Tampa Northern Railway Company, Tampa, Fla.; United States Department of Agriculture, on the power-house at Washington, D. C.—have found **NEPONSET** PAROID ROOFING particularly well adapted to the Southern climate.

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Quotations delivered anywhere.
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Prompt and efficient service.

A roof is only as good as its waterproofing

Knowing this, will you buy the covering for your roof on its "looks" alone, and not know what it is made of?

Genasco

the Trinidad-Lake-Asphalt Roofing

is waterproofed entirely with *natural* asphalt. In Trinidad Lake this asphalt has resisted blazing sun and terrific storms for hundreds of years. It has natural oils that give it lasting life in a roof despite the buffeting of rain, snow, sun, wind, heat, cold, and fire.

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The life and backbone of Genasco is Trinidad Lake Asphalt—the *natural* everlasting waterproofer—and that makes Genasco last. Genasco is made with mineral and smooth surfaces. Guaranteed, of course.

The Kant-leak Kleet waterproofs the seams of roofing thoroughly without the use of smoky unsightly cement, avoids nail-leaks, and gives the roof an attractive appearance. Ask your dealer for Genasco Roofing, with Kant-leak Kleets packed in the roll. Write us for the Good Roof Guide Book and samples.

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Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

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Trinidad Lake Asphalt
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Standardized Construction

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With Improved "Lock That Locks"
Watertight — Fireproof — Durable — Economical

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Seems odd, but listen—

They save money;
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They stay in place
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They look good.

No one wants more than these advantages.

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What roof will you choose? One that needs constant expense for repairs, painting and possible damage to the contents of your building. Or a roof like

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which outlives the building without paint or repairs. It is non-metallic and needs no paint to keep it from rusting. It is non-porous, therefore, cannot absorb anything that causes decay.

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Made for Factories, Foundries, Mills, Machine Shops, Railroad Buildings and Manufacturing Plants of all kinds where a permanent, acid and fire-resisting roof is necessary.

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Contains no tar, rubber or paper, and will not rot, crack, melt or corrode. Stands any climate. Acid-resisting. Fire-resisting.

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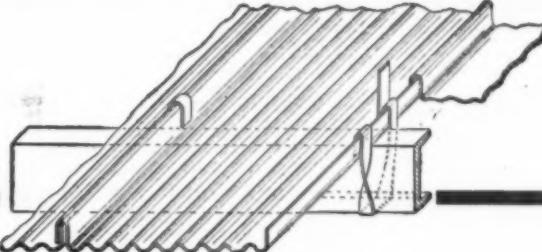
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Metal Ceilings, Metal Shingles, Metal Spanish Tile, Metal Culverts, Galvanized Cornice, Skylights, Ventilators, Ridging, Cresting, Etc.

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—who have tested them out—have to say from actual experience.

Parties interested in the purchase of Sewer Pipe or Clay Working Machinery had better investigate from "old reliable concerns" who have used our machinery for many, many years past.

WE REFER YOU TO THEM—A PARTIAL LIST, AS FOLLOWS:

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Salt Lake Pressed Brick Co.	-	Salt Lake City, Utah	San Antonio Sewer Pipe Co.	-	San Antonio, Tex.
Robinson, Graves S. P. Co.	-	Uhrichsville, Ohio	Denver Sewer Pipe Co.	-	Denver, Colo.
Robinson Clay Product Co.	-	Akron, Ohio	W. S. Dickey Clay Mfg. Co.	-	Kansas City, Mo.
Shawmut Brick Works	-	Shawmut, Pa.	Lehigh Sewer Pipe & Tile Co.	-	Fort Dodge, Iowa
Pomona Terra Cotta Co.	-	Pomona, N. C.	Lehigh Clay Products Co.	-	Lehigh, Iowa
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GREATER CAPACITY, LESS WEAR AND TEAR,
IMPROVED OUTPUT

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As the accompanying cut shows, the screen is made up of two hoppers substantially mounted on a steel frame. The screen plate is circular, with large screening surface. It is supported by spiders in a horizontal position. The spiders are keyed to the vertical shaft, which is connected to the driving shaft by a pair of bevel gears.

Just beneath the screen plate is a steam coil heater arranged to heat the screen plate to prevent damp clay from clogging the perforations in the plate.

Surrounding the vertical shaft is a cast-iron hopper or spout, through which the clay is fed to the screen plate. This hopper can be raised or lowered to regulate the flow of clay on the screen. The hopper being always full of clay, keeps an even flow to the screen. The screen as it revolves throws the clay from the center to the outside of the screen plate, the flow being even and regular. The larger particles of clay, too large to pass through the perforations, pass over the screen plate to the outside and fall through the outer housing to a spout conveying them to the grinding pan for regrinding. The fine particles of clay sift through the screen plate into the inner housing or hopper, and pass to a conveyor and into the clay bin.

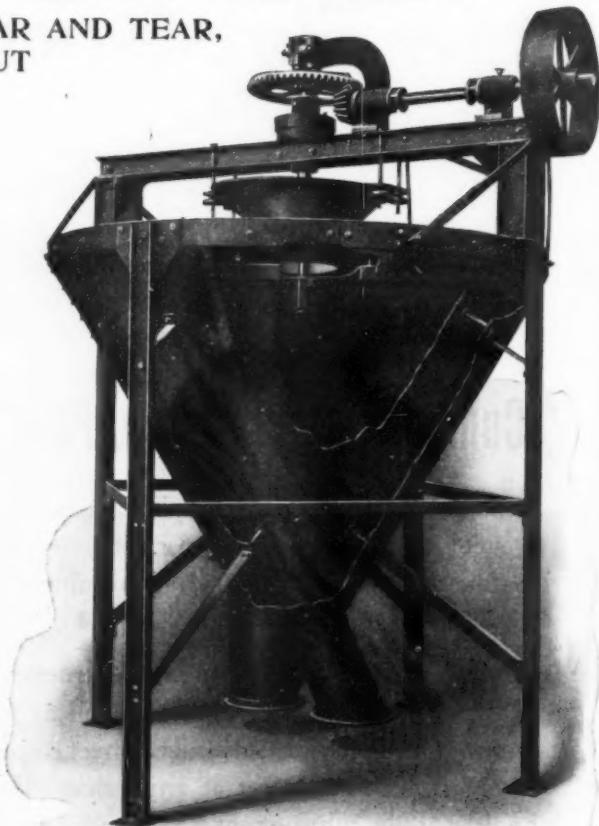
The whole operation is rapid and thorough, and the principle insures great capacity and freedom from trouble. Many of these screens have been installed, and are giving universal satisfaction.

In actual operation the No. 147 Screen, which has a screen plate six feet in diameter, is screening equal to the capacity of two nine-foot dry pans. We also build this screen with a four-foot screen, which will handle clay to the capacity of one pan.

Full particulars as to the construction and operation of this screen will be sent upon request.

We build every machine and appliance required for the manufacture of every class of clay products by all processes. We are much the largest manufacturers of Clayworking Machinery in the world. Manufacturing as we do every machine and appliance right in our own factories, we are better prepared to serve you at a saving in time and money than others, and insure the quality of your machinery.

THE AMERICAN CLAY MACHINERY CO.



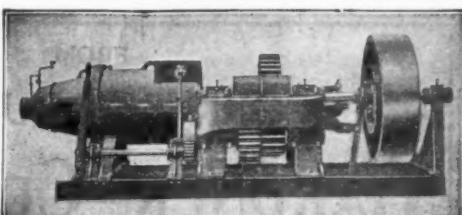
CENTRIFUGAL CLAY SCREEN, Patented and Patents Pending

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**"NEW SOUTH"
Brick Machinery**

Specially designed for working Southern Clays. Five sizes of machines. Six to one hundred thousand bricks per day. Hundreds in daily use. Sixteen years' experience.



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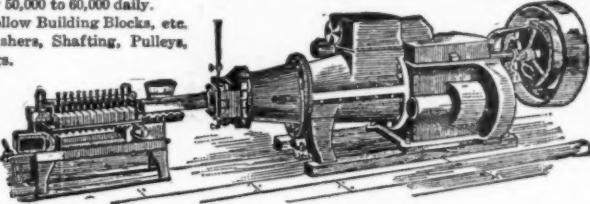
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Drain Tile, Hollow Building Blocks, etc.
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Pure Wood Turpentine, Pine Oils, Pine Tar, Oil of Tar
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CAPACITY TWO MILLION FEET B. M. PER MONTH
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Twenty-eight miles from New Orleans, La., surrounded by the finest
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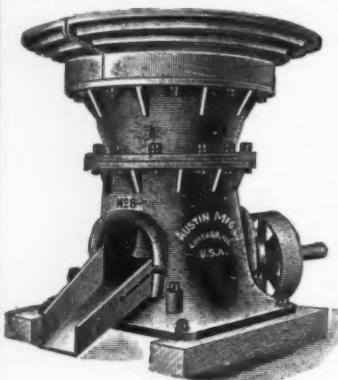
CROSS TIES

AND SAVE THE WASTE OF STUMPAGE

THE STANDARD CROSS TIE MCH. CO. NEW ORLEANS, LA.

**YELLOW PINE
DOORS
COLUMBUS IRON WORKS CO.
COLUMBUS, GA.**

Austin Gyraitory Rock Crushers



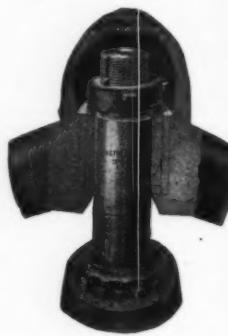
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The Only Self-Lubricating Crusher.

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Simple Construction. Correct Design. Thousands in use.

Built in 9 sizes, with capacities 50 to 5000 tons per day. Plans and Specifications Furnished for Any Sized Plant.



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McCully Gyratory Rock Crusher

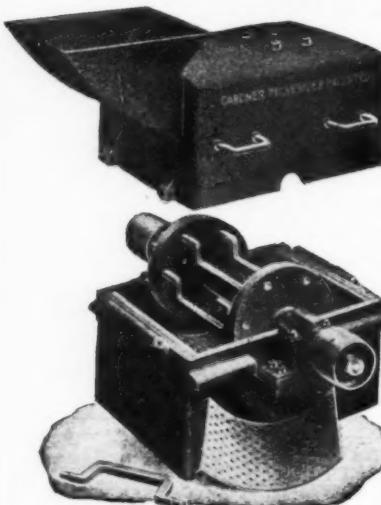
Simple in Construction
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The original successful gyratory crusher. Designs always maintained up to date. Has stood severest service for years. Has greatest capacity. Can crush finer than any other gyratory breaker.

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ARE THE BEST FOR FINE REDUCTION

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WILLIAMS PATENT HAMMER TYPE

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**Machinery for Handling
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Various Capacities.
Appomattox Iron Works
PETERSBURG, VA.



**65 cents a day
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Gentlemen: —We have succeeded with this three-ton Kelly Truck in doing all our carting, which was formerly done by three two-horse teams, and make all our deliveries promptly and without delay.

The cost of operating is very slight, and our running expense of gasoline and oil per day has never exceeded sixty-five cents.

This truck is used for very heavy freight hauling, and the Blower System has proven very satisfactory. We have never seen the motor overheated, and the results obtained from the Blower System proved that it is a very satisfactory system. Yours respectfully,

L. HOWER,
By LEO A. HOWER, Manager.

In the big motor truck contest at Philadelphia Kelly Motor Trucks won two trophies for low operating cost; at Boston, three; at New York, one—bearing not only the best known American trucks but representatives of Germany, France and England.

But it is actual service costs like this that confirm the results of these contests and bring home more definitely the superiority of Kelly Motor Trucks to the mind of the man who is considering installing motor truck service.

THE KELLY MOTOR TRUCK COMPANY,
238 Burt Street, Springfield, Ohio.

We have some valuable specific information for you regarding the work of Kelly Motor Trucks in the particular line of business in which you are interested, and we will be glad to send it by return mail, together with full details of construction if you'll write us. **TEAR OFF THIS COUPON**

THE
KELLY
MOTOR
TRUCK CO.
238 Burt St.
Springfield, Ohio

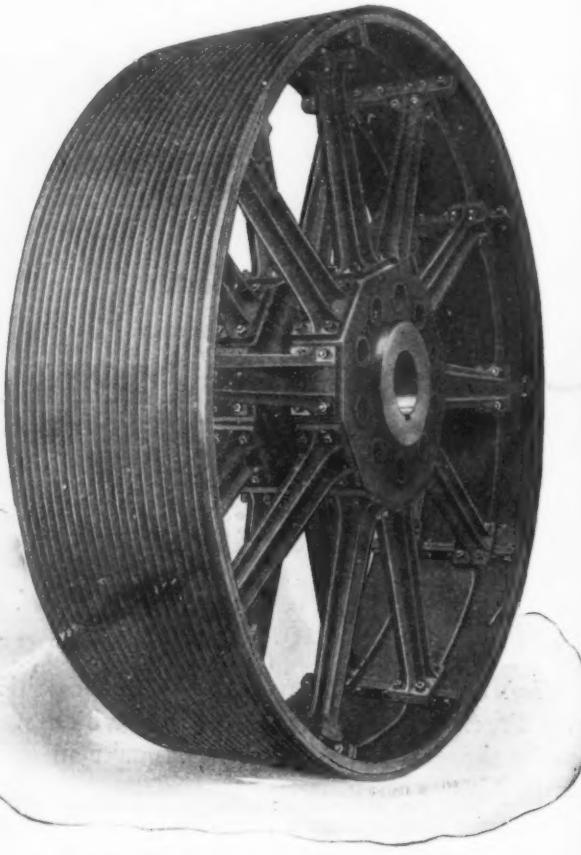
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Please send me complete details regarding Kelly Motor Trucks.

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Address.....
Kind of business.....

Superior Quality in POWER TRANSMISSION MACHINERY and Rope Drive Equipment

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For more than 50 years we have followed a practice of making our output a recognized standard, avoiding any semblance of cheapness in construction, finish and material.



Many large and important installations have proven our ability to build and erect transmission machinery of unequalled efficiency and durability. We preach economy in this direction, but have had experience enough to judge what economy in its true sense really is when applied to this class of plant equipment. You can rely upon our judgment and dependability. We also make a specialty of building heavy machinery.

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Don't forget to mention the MANUFACTURERS RECORD when writing to them.

Pay 17 Cents a Day and Own The Printype Oliver Typewriter

IMPORTANT: The introduction of the Printype Model came as the climax to our great advertising campaign in which we offered The Oliver Typewriter No. 5 on the 17-Cents-a-Day Purchase Plan. For months past we have devoted all our advertising announcements to the new Printype Oliver Typewriter, its revolutionary improvement in typewriting type.

The impression has gained ground that the 17-Cents-a-Day Purchase Plan does not apply to the Printype Model. In some instances the idea prevails that we can even charge extra for The Oliver Typewriter equipped with Printype.

We desire to state with all possible emphasis that The Printype Oliver Typewriter can be purchased on the "17-Cents-a-Day" Plan at the regular price of \$100.

The Machine That "Typewrites Print!"

America rings with praise for The Printype Oliver Typewriter—the first writing machine that successfully TYPE-WRITES PRINT!

This remarkable machine combines all the operative conveniences, all the practical improvements of the most highly perfected typewriter, with the type that from time immemorial has been used for magazines and books!

It is infinitely superior to the old-style, thin outline Pica typewriter type—a fact which none will deny. It ranks in importance with visible writing, which the Oliver introduced.

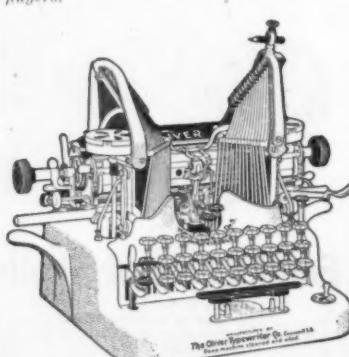
The preference of typewriter buyers is so overwhelmingly in favor of Printype that already over 70 per cent. of our total output are "Printypes."

The advantages of Printype are self-evident. The story is told at a glance.

Its beauty, its symmetry, its clearness and character lend a new distinction to typewritten correspondence.

Printype Increases Speed

Not only does Printype enhance the artistic appearance of typewritten matter, but it enables the operator to attain greater speed, as the type is so easy on the eyes. It relieves the tension on the nerves and thus gives wings to the fingers.



The OLIVER Typewriter

The Standard Visible Writer

With all its commanding advantages from a purely mechanical standpoint, and its new artistic triumphs, its supremacy is unquestioned. Its simplicity, versatility and extreme durability all rest around the great basic feature—the Oliver Double Type-Bar.

Without this Double Type-Bar the successful use of Printype would be absolutely impossible.

"17-Cents-a-Day" Plan

This machine—The Printype Oliver Typewriter—offered on the famous "17-Cents-a-Day" Plan—has all the improvements, all the exclusive features which our experts have developed. It has the Vertical and Horizontal Line-Ruling Device, the Disappearing Indicator, the Back Spacer, the Tabulator, the Adjustable Paper Feed, the Double Release, the Automatic Spacer, the Locomotive Base and many other innovations which contribute to high efficiency. It operates with the lightest touch and, of course, writes in sight.

Why Don't You Write Us Today?

How can you resist the attractions of "Printype" and the appeal of the "Penny Plan?"

Here is the world's greatest writing machine—The Printype Oliver Typewriter—the standard visible writer—the regular \$100 machine—actually offered for pennies!

A small first payment brings The Printype Oliver Typewriter. Then you save 17 cents a day and pay monthly.

Your request will bring the special Printype Catalog, the details of the Penny Plan and a letter written in Printype. Whether you are "Commander-in-Chief" of a business or a private in the ranks, you will be greatly interested in the literature we will send you.

The Oliver Typewriter Company
12 East Fayette St., Baltimore, Md.

A Billion Dollars

were received by the South from Sept. 1, 1910 to Aug. 31st, 1911 for cotton alone. This year's cotton crop will bring the South at least another billion, and cotton represents only one-third of the value of the South's agricultural products. This means the South will be a big buyer of machinery and supplies of all kinds; that it will build more hotels and office buildings and fine dwellings; that it will build more good roads and do more municipal work than ever before. Do you want to increase your trade with such a rapidly growing section? The proven way of doing this is through the advertising columns of the Manufacturers Record.



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The function of this heating system is to ensure uniform car temperatures in mild or severe weather, by automatically maintaining any desired temperature of the radiating pipes between 140 and 280 degrees Fahrenheit. It is the only system which does.

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AND LIGHTING CO.**
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Wrapping
Paper**

By increasing the strength we are able to reduce the weight of Wrapping Paper. You can get better paper quality and more wrapping surface in Nibroc Kraft Wrapping Paper.

Nibroc Kraft Wrapping Paper means extra quantity as well as quality for your money.

Write us NOW for further facts, prices, samples, and name of nearest dealer.

BERLIN MILLS COMPANY
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"FLORIDA BY SEA"

DIRECT ROUTE BALTIMORE
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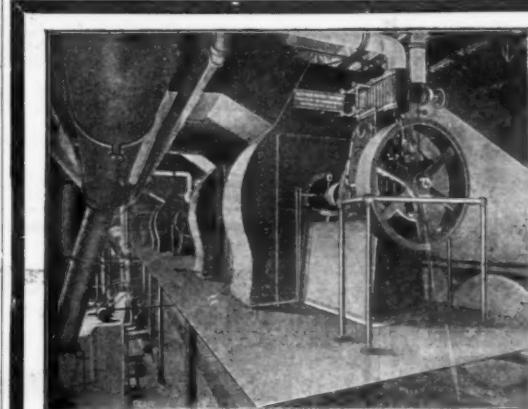
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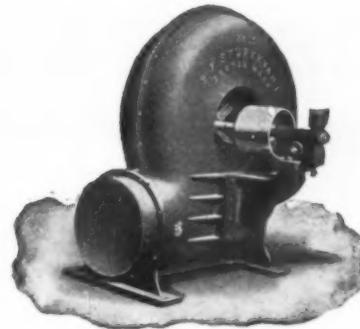
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Buffalo Apparatus in the Induced Draft Plant
of the Wm. J. Lemp Brewing Company, St. Louis, Mo.

Write our nearest house, Dept. Q,
for details, specifications
and prices.

Have You Ever Thought How a
Sturtevant Fan
Could Be Applied to Your Business?



Hundreds of Sturtevant Monogram Fans illustrated above are in use in machine shops all over the world, blowing chips from lathes, furnishing blast for forges and furnaces, cooling and drying material and performing many other feats.

Sturtevant Fans are also built in many other types and in all sizes, with capacities from 75 to 1,000,000 cubic feet per minute.

Sturtevant Engineers are continually accomplishing new results in fan application. They are always ready to recommend and suggest if you will inform them of the conditions.

Bulletin No. 136-N describes these fans

B. F. Sturtevant Co.
Hyde Park, Mass.

862

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THE NEW JERSEY WIRE CLOTH CO.
Manufactures

WIRE CLOTH
WIRE LATHING
JERSEY POULTRY NETTING
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Our Extensive Facilities Enable Us to Execute Large Orders Promptly at Low Prices

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"Buffalo" System of Mechanical Draft

The most scientific and up-to-date method of increasing boiler-plant efficiency.

Gives every boiler-plant the widest possible range of capacity, with flexible, positive and instantaneous control. Every sudden demand for steam is easily and quickly met. Combustion is maintained at highest efficiency, while low grade fuel can be used to great advantage.

Installations of this system are today in successful use in mills and factories, gas, electric light and power plants, and public buildings. Their ready adaptability to every condition makes their use standard in the modern boiler plant.

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OUR RINGS
Set the Standard for Quality
MIRROR SPINNING RINGS

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 PERMANENT SKYLIGHTS
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 OF ALL KINDS AND FOR ALL USES
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It means QUALITY, and it is on this basis we ask the opportunity to take it up with you.

Catalog "C" is yours for the asking.

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LIGHT IN A TEXTILE MILL
MEANS ECONOMY
STA-WHITE GIVES LIGHT

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FIREPROOFING OUR NAVY WITH THE DAHLSTROM PRODUCTS

The newest battleships Florida and Utah will be equipped with the Dahlstrom Products.

The need of thin interior fireproofing with steel upon the sea, with every avenue of escape cut off, is no greater than in your building. The walls and floors of fireproof construction are no more protection to life and contents than the battleship's steel hull.

"Buildings As They Should Be" tells more about Dahlstrom Metallic Doors and Trim — what constitutes interior protection. Your request brings a copy. Write

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 EXECUTIVE OFFICES AND FACTORIES—73 Blackstone Ave., Jamestown, N. Y.
 BRANCH OFFICES IN ALL PRINCIPAL CITIES.

THE DAHLSTROM PRODUCTS

MOTORS

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Damp or Dusty Places

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Wire Rope Confidence

Our business and reputation are founded on the care we give to making **YELLOW STRAND WIRE ROPE**.

If you have used it, you know. If you haven't, your knowledge of our standing will give you the confidence to try it.

YELLOW STRAND never betrayed a confidence.


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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office.

VOL. LX. No. 14. }
WEEKLY. }

BALTIMORE, OCTOBER 12, 1911

\$4.00 A YEAR.
SINGLE COPIES, 15 CENTS.

Manufacturers Record.

PUBLISHED EVERY THURSDAY BY THE
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[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, OCTOBER 12, 1911.

JACKSONVILLE-NEW YORK HIGHWAY.

Interest in the Southeastern States in the tour of the American Automobile Association, to begin next Saturday and to cover 1450 miles between New York City and Jacksonville, by way of Philadelphia, Gettysburg, the Valley of Virginia, Winston-Salem, Charlotte, Spartanburg, Atlanta and other cities, is likely to result in an acceleration of the work of road improvement generally in the States traversed, and to hasten the perfecting of a continuous improved highway between Florida and New York, with a possibility of its extension into Canada. Eighty-three automobiles have entered for this year's run, and their experiences are bound to bring out suggestions for Southern road-building.

TEXTILE GOODS FOR EXPORT.

Says the *Textile Mercury* of Manchester, England:

When the South American importer (say in Colombia) is in a hurry for goods he favors the New York market; but when times are dull and he is in no particular hurry as to delivery he prefers to order English prints, made up to suit himself. On most lines of cotton goods, especially prints, the English exporter makes up his samples in much better and more permanent form than does his American competitor, and he supplies a larger range of samples.

American textile manufacturers should take a hint in that statement and prepare themselves to make the best of the opportunities for an extension of trade to South America following the opening of the Panama Canal. They should note the fact that the South American importer makes a practice of buying from the country

which sends him the goods manufactured to suit him. American manufacturers must come to know that trade based upon hurry orders can be held and extended only by making use of such orders as a means for opening up markets for which special lines of goods must be manufactured.

TO EMPHASIZE THE SOUTH'S IRON RESOURCES.

It is exceedingly important that the extent of the iron-ore resources of the South held by independent interests should be brought very conspicuously to public attention during the investigation by the Stanley Committee, the sessions of which will probably be resumed this fall. If the impression that the Steel Corporation owns the bulk of Southern ores should gain general acceptance, it might be difficult to enlist new capital for the development of the great ore resources of the South owned by other people. A number of noted experts, including State geologists, have from time to time emphasized through the MANUFACTURERS RECORD the fact that the Steel Corporation does not own more than 20 per cent. of the steel-making ores of the South. These experts, who for years have given the closest study to the mineral resources of the section, ought to be invited to give to the Committee the result of their years of investigation. Unless this be done it will be impossible for the Committee to intelligently discuss the whole situation.

If it were true that the Steel Corporation owned 80 per cent. of the steel-making ores of the South, it would indeed be unfortunate for this section; for it would mean either that the supply of ore in the South is far less than experts claim, or else that there could be no very great iron and steel development in the South outside of the Steel Corporation. Either dilemma would be most unfortunate, even if the Steel Corporation would spend hundreds of millions of dollars in the development of its Alabama property. As there are great independent steel companies in Pennsylvania, New York and the West, so it is desirable that there should be strong independent iron and steel companies in the South. In order, therefore, that the facts may be fully known and that capital may be induced to investigate the possibilities of steel-making in the South, it would be desirable if the State geologists of each Southern State should be asked by the Stanley Committee to present a clear and definite statement as to the resources in iron ore of his own State, and to as great an extent as he may be able to judge from personal investigations, of the whole South. Some of these State geologists not only investigated their own States, but are thoroughly familiar with the iron-ore resources of other States, and the more light that can be thrown upon the subject the better it will be for the work of the Committee and for the good of the country.

SOUTHERN DOMESTIC STOCK.

Indicative of the steady betterment of farm conditions in the South are the figures showing the increases between 1900 and 1910 in the value of domestic animals, poultry and bees on farms and ranges. In the ten years the aggregate value in the South increased from \$967,217,715 to \$1,589,240,320, or by \$622,022,605, equal to 64.3 per cent., while the gain in the rest of the country was from \$2,107,914,551 to \$3,305,708,462, or by \$1,197,793,911, equal to 56.8 per cent. The increases by separate States are shown in the following table, the figures of 1900 being as of June 1 and those of 1910 as of April 15:

States.	1900.	1910.	Increase.	Per cent.
Alabama.....	\$26,105,799	\$25,558,459	\$29,452,680	81.6
Arkansas.....	37,483,771	73,929,913	36,446,142	97.2
District of Columbia.....	125,326	151,625	26,299	21.0
Florida.....	11,166,016	20,546,978	9,380,962	84.0
Georgia.....	35,200,507	80,251,407	45,050,900	128.0
Kentucky.....	73,728,506	117,338,274	43,599,768	59.1
Louisiana.....	28,869,506	44,646,639	15,777,133	54.7
Maryland.....	20,855,877	32,570,134	11,742,257	56.2
Mississippi.....	42,657,222	74,874,137	32,216,915	75.5
Missouri.....	160,523,939	285,242,607	124,718,668	77.7
North Carolina.....	30,106,173	62,590,223	32,474,050	107.9
Oklahoma.....	96,208,263	144,276,068	48,067,805	50.0
South Carolina.....	20,199,859	45,031,088	24,831,229	122.9
Tennessee.....	60,806,295	110,553,950	49,747,655	81.8
Texas.....	240,572,690	313,764,263	73,191,603	30.4
Virginia.....	42,026,737	74,824,402	32,797,665	78.0
West Virginia.....	30,571,250	43,100,153	12,528,894	41.0
Total.....	\$967,217,715	\$1,589,240,320	\$622,022,605	64.3
United States.....	\$3,075,132,366	\$4,894,948,782	\$1,819,816,516	59.2

Percentages of Increases in Values.

States.	Mules					Bees.
	Horses and mule colts.	and mule colts.	Asses and burros.	Sheep and lamb.	Goats and kids.	
Alabama.....	37.5	72.6	140.8	6.6	50.8	*39.6
Arkansas.....	29.9	127.5	170.8	110.9	73.3	*25.0
Dist. of Columbia...	37.3	*5.1	*3.1	....	129.0	....
Florida.....	45.8	111.3	228.9	209.3	162.6	7.0
Georgia.....	58.9	100.2	203.5	77.5	110.1	*29.7
Kentucky.....	3.7	82.3	137.6	84.3	72.7	32.8
Louisiana.....	35.1	77.7	46.7	35.9	155.6	3.0
Maryland.....	14.8	79.5	118.3	420.6	33.9	64.1
Mississippi.....	26.2	85.8	125.1	29.2	65.1	*22.5
Missouri.....	*3.9	170.1	180.1	173.9	92.8	135.0
North Carolina....	63.5	109.3	172.8	84.1	17.0	13.2
Oklahoma.....	*39.3	258.5	369.2	240.4	163.0	9.8
South Carolina....	63.2	108.9	182.5	176.1	80.6	*27.5
Tennessee.....	34.1	99.5	116.4	52.7	51.3	154.8
Texas.....	*29.9	142.1	193.7	95.3	52.6	34.1
Virginia.....	25.3	127.2	158.0	132.9	61.8	57.6
West Virginia.....	12.2	77.9	84.2	64.5	49.4	27.1

*Decrease.

The average rate of increase in the South was greater than that in any other section of the country, except the Pacific Coast, where the increase in California, Oregon and Washington was from \$123,316,567 to \$227,555,236, or by \$104,238,669, equal to 84.5 per cent. The actual increase in those three States was about one-sixth of the increase in the South. The increase in the six New England States was \$23,053,280, or 30.8 per cent.; in New York, Pennsylvania and New Jersey 42 per cent., and in Illinois, Ohio, Indiana, Wisconsin and Michigan 61.4 per cent. The average rate of increase for the country was 59.2 per cent. That rate was exceeded in only 21 of the 48 States and Territories, and of the 21, 10 were in the South, the rates of increase being, Alabama, 81.6 per cent.; Arkansas, 97.2; Florida, 84; Georgia, 128; Mississippi, 75.5; Missouri, 77.7;

nies, shown in the accompanying table. Oklahoma led in the rates of increase in both classes, as also in the cases of swine and poultry, which is to be accounted for largely by the leadership of that State among the sixteen States in the rate of increase in population. Of the other fifteen States, Missouri led in the rate of increase in the value of horses and colts, with Texas second, Arkansas third, Virginia fourth, Florida fifth, North Carolina sixth, South Carolina seventh and Georgia eighth, and as to mules and mule colts, Florida led, with Georgia second, Texas third, South Carolina fourth, Missouri fifth, North Carolina sixth, Arkansas seventh and Virginia eighth. Florida, Georgia, Louisiana and Oklahoma were the only States of the sixteen having a rate of increase in the value of swine greater than 100 per cent., and the decreased rate of increase in the value of cattle

In two or three States, especially Oklahoma and Texas, is due principally to the change in those States from ranges to farms.

In all the States but Florida and West Virginia the value of mules and horses and their progeny was more than half the value of domestic stock in 1910, the value of these animals being 75.3 per cent. of the total in South Carolina, 72.4 per cent. in Georgia, 69.5 per cent. in Mississippi, 68.9 per cent. in Alabama, 67.9 per cent. in Arkansas and 67.2 per cent. in North Carolina. The value of cattle in Texas was 41.2 per cent. of the total in that State, and in Florida it was 40 per cent., the other percentages in this class ranging from 15.7 per cent. in South Carolina and 17.5 per cent. in Georgia to 36.6 per cent. in West Virginia. In the case neither of cattle nor of sheep is the South living up to its opportunities. But with increasing populations in the cities there may be expected to be an expansion in attention to dairy cattle, as well as to poultry.

A TRIPLE MALLETT LOCOMOTIVE.

C. T. Ripley, assistant engineer of tests of the Atchison, Topeka & Santa Fe Railway, Topeka, Kans., is reported in a dispatch from there as saying that the officers in the mechanical department of the company are working on a plan to build a new and huge locomotive of the compound articulated type, which will be practically three locomotives working as one, and supplied with steam from a single boiler of immense proportions. It may be several years before the new type is perfected, but Mr. Ripley is quoted thus:

"Within a few years we expect to have a triple Mallet, and with this completed there seems to be no obstacle in having four coupled into one."

Not long ago the Atchison, Topeka & Santa Fe Railway produced the largest Mallet compound locomotive which has thus far been seen, and then built several of the same size. These engines weigh without tender 308 tons each, and their length, including the tender, is over 121 feet. They were constructed by taking two engines of a type having one pair of truck wheels and five pairs of driving wheels and combining them with one great boiler and high and low pressure cylinders after the Mallet pattern, which has become familiar in this country in connection with the hauling of heavy freight trains on grades in mountain country. Now it appears, with the object of further reducing the cost of operation per ton per mile, the company is endeavoring to create a decided innovation in locomotive practice by "going one better" as compared with the Mallet articulated. But there are some mechanical problems to be solved, and difficulties experienced at times with the present Mallet engines indicate what may be expected with the addition of the mechanism of another engine to the type that now consists of two. Some patents have already been obtained for the new invention.

Notwithstanding that the present Mallet compound locomotives seem cumbrously large, it is not unreasonable to anticipate that even larger engines may be built and successfully operated. There is, of course, a limit to the steam-making capacity of a single firebox on a locomotive, hampered as it is by conditions which prevent enlargement beyond certain dimensions. The Atchison mechanical engineers appear to think it has not been attained in the Mallet compound locomotive, as

we now know it, working the mechanism of two ordinary locomotives by means of one firebox and one boiler, and it may be they are right in their opinions, although it looks as if they have undertaken a task of severe problems. Surely, however, all will wish them success in their endeavors and hope that the world may soon see the construction of a locomotive which will be a boon to the railroads, which are sorely pressed to keep down expenses, as well as to the public, which is constantly demanding better and better service.

It will truly be a marvel if a triple Mallet compound is produced, but words would fail to express feeling should a quadruple be given to the railroads. Nevertheless, more marvelous things than that have come to pass.

THE MUSSEL INDUSTRY.

That the National Bureau of Fisheries has been making a special study of the habits and the habitats of mussels with a view to the maintenance, if not an increase, of the supply of material for the manufacture of pearl buttons, directs attention to a subject in which a number of Southern States have a great interest. Seventeen States produce mussels, but only in twelve of them occur the fresh-water mussel, the shells of which are used in the manufacture of buttons. Though the use of these shells in button manufacturing dates back twenty years, it was not until in recent years that there has been any considerable expansion in the industry. But there are now about fifty factories using the shells in making buttons. Originally the mussels were sought for their pearls, and at various periods, notably in 1878, 1889, 1895, 1901, 1903 and 1906, there has been considerable excitement over mussel pearl fishing, and at one time 10,000 persons in Arkansas were engaged in it. In 1908 the mussel-shell fisheries in the country produced to the value of \$692,000, of which \$392,000 represented shells and \$300,000 pearls and slugs. With the exception of Connecticut, which produced to the value of \$5400 in shells, the mussel fisheries are in the waters of the Mississippi River and its tributaries in Arkansas, Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, Tennessee and Wisconsin. Of the 1908 product, Illinois produced 52 per cent. Bearing upon the necessity for measures to preserve the industry, a bulletin of the National Census Bureau says:

The decrease in the quantity of the mussel shells taken in the Iowa and Wisconsin fisheries means that the pearl industry in those States is in danger. Manufacturers have been interested in schemes for providing a future supply, either by protected legislation, which shall promote natural increase, or by an attempt at private culture. The latter plan, however, has not been more than considered. The especially discouraging feature is that at least 10 years are required to grow most of the varieties to commercial size, during which period the mollusk is beset with many dangers, both from the fish, which prey on it, and from the physiological conditions which surround it. The only experiments in private culture have been in the growth of pearls within the mussel, not of the mussel itself. These attempts have not yet passed beyond the experimental stage. The enactment of protective legislation also presents its problems. Because of the different size of various species at maturity, no uniform restriction as to minimum size can be prescribed, and if a specific size for each variety were established it would be impossible, owing to the close resemblance between nearly all of the different species, for any but biologists to do the gathering. Furthermore, as the spawning time is very irregular and uncertain, the proper period for a closed season is difficult to determine. The State of Illinois, however, has enacted legislation establishing a

closed season from October 1 to April 1, and has set limits to the capacity of apparatus used.

The growth of the mussel fisheries between 1894, when the output was 196,000 pounds of shells, valued at \$2700, and 1908, when the output was \$1,863,000 pounds, valued at \$692,000, is responsible for a decline in the industry in certain overworked waters. In 1908 the output in Arkansas, Kentucky and Tennessee had a value of \$104,000, about one-sixth of the total. But the possibilities in the waters of those States is emphasized by the fact that the investigations under the auspices of the bureau of fisheries to discover where and when the best breeding stock can be obtained and what rivers are suitable for planting the young mussels have been made in the Cumberland River, and that 2000 of the best species were planted in the river at Clarksville, Tenn.

SOUTH'S APPLE GROWING.

At a recent meeting of farmers in Pennsylvania an apple-grower of that State, comparing the opportunities for profitable apple-growing there with those on the Pacific Coast, with special reference to the advantages in the East as to prices of land and accessibility in markets, was quoted as follows:

For instance, take an acre of apple land in Pennsylvania. It will figure at about \$100 per acre. Take into consideration the interest on the \$100, and the cost of producing a crop on that plot, which will be about \$20, the same amount for freight to New York and \$36 for barrels, and you have raised the crop at a cost of \$82. From the acre you will get about 100 barrels of apples, which will sell in New York for about \$500 wholesale, yielding a profit of \$418.

But there are opportunities in the South equal to those of Pennsylvania, and men who seize the opportunities are pretty sure to have no regrets in the future. Typical of what may be done in the apple-growing regions of the South is the experience in Jefferson county, West Virginia, of C. D. Wysong, set forth in the Shepherdstown *Independent*. In 1897 Mr. Wysong planted in apple trees 20 acres of land valued at about \$50 an acre. Since that time he has spent from \$150 to \$550 a year in pruning, fertilizing, spraying, etc., and such expenditures added to the interest on the investment in the land and the amount lost in crops make a total of \$6351. Since planting the orchard he has harvested from the land 15 tons of hay, 300 bushels of corn and \$4000 worth of apples, and his crop this year is estimated at \$6000. The orchard is now coming into its best condition, and is expected to bring a good revenue for a number of years to come.

West Virginia's apple industry is a steadily growing one, but there are commercial orchards of increasing importance in North Carolina, Arkansas, Maryland, Missouri and other States, while Virginia apples have long had world fame.

THE POWER TO HOLD AND INCREASE BUSINESS.

The National Lumber Manufacturers' Association, having watched with much alarm the rapid substitution of other building materials for lumber, has determined to make a vigorous fight to again bring lumber into public favor for building purposes. A committee appointed by the association for a consideration of the entire situation, in its report, referring to the development of an enormous demand for substitutes for lumber, said:

At the same time wood, "the natural and historic building material," and "mankind's

instinctive reliance," was complacently allowing itself to be shouldered out, without even a protest, or a contest or an argument. Your committee regrets to believe that the result is now a much harder fight to "come back" than should have been necessary; but we are absolutely convinced that it can be done. Advertising has done equal tasks for others and can be made to do it for us.

This association, representing hundreds of millions of dollars invested in manufacturing, puts on record its recognition of the fact that it was advertising which created the market for cement and other substitutes for lumber in building operations, and its belief that even though it will have difficulty in bringing lumber back to its former favored position, the power of advertising is equal to this accomplishment, for, adds the report, "advertising has done equal tasks for others, and can be made to do it for us."

This report states that the amount of money expended in advertising substitutes for lumber now aggregates more than \$3,000,000 a year, and calls upon the lumber trade to unite in the establishment and maintenance of an advertising bureau, to secure the ablest and best qualified counsel or agent to direct the work, and suggests an assessment of one cent on every thousand feet of lumber cut by mills having membership in the affiliated lumber association.

It would be difficult to pay a higher tribute to the power of advertising than this report to the National Lumber Manufacturers' Association. These statements, it should be understood, come not from the publishers, but from men who, having watched their business steadily slipping away from them during the last seven or eight years, realize that this has been because of their failure to properly advertise, while competing materials were being heavily advertised. They freely admit that it is very much harder to regain the lost trade than it would have been to maintain lumber's favored position by a proper system of advertising. The lesson is one that should be taken to heart by every business interest in the country. It is as applicable to towns, and cities, and States, and railroads as to individual manufacturing enterprises. Momentum of steady progress can be much more easily maintained by judicious advertising than the inertia of arrested development be overcome, or a position regained after trade or business has been permitted to slide down hill. There is no time when advertising cannot be used to advantage. When on the highroad of prosperity, with every business interest booming, advertising is needed in order to prevent the slow but certain development of the inertia which means decay and death; while in times of depression and inactivity advertising is the only tonic that will bring back health.

THE SOUTH IN MOVING PICTURES.

Commercial secretaries of South Carolina are arranging to use the moving picture as a means of setting forth in the Middle West the material resources of their State and its agricultural, manufacturing and commercial opportunities. Tampa, Fla., and other cities of the South are also interested in a like plan, which looks to an exhibition of the pictures at gatherings in the North and West as an inducement to immigration to the South. Provided the moving pictures are viewed by a class of people from whom desirable immigrants may be recruited, the plan might prove an effective means of advertising the South.

October 12, 1911.]

MANUFACTURERS RECORD.

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Alabama Iron and Steel Merger.

A BIG COMBINATION, BACKED BY STRONG FINANCIAL FORCES.

Every development on a large scale of the iron and steel interests of the South by independent companies through the investment of new capital emphasizes the confidence of well-informed men in the vast stores of ore in this section not owned by the United States Steel Corporation. The impression made upon that portion of the public not familiar with the extent of the South's ore supplies, that the Steel Corporation dominated the ores of that section, would have been exceedingly injurious to the South and to every independent iron company there if it had been accepted as correct by the moneyed men of the land. The many reports published in the MANUFACTURERS RECORD by such experts as Eckel, Catlett, Porter, State geologists and others, showing that scarcely 20 per cent. of the ores of the South are owned by the Steel Corporation, have had a very marked effect in creating renewed interest in the steel-making possibilities of that section. Notwithstanding the extreme depression in iron and steel and coal for many months, far-seeing men realize that the country must keep on growing, and that sooner or later there will come activity and prosperity again. And the best time to prepare for good times is during bad times, so as to be ready with every facility of production to meet enlarged demand. It is therefore especially important that an iron and steel enterprise based on a merger of existing companies, in order to enlarge their operations, especially in steel-making, is now being perfected. This is a consolidation of iron and steel and coal interests in Alabama of great magnitude and far-reaching importance, bringing into the development of that district great financial forces not heretofore identified with it, which is now rapidly materializing through plans which have been worked out for the final completion of the merger of the Alabama Consolidated Coal & Iron Co. and the Southern Iron & Steel Co. into a new company to be known as the Alabama Consolidated Iron & Steel Co.

The committee which is working out these details represents some of the strongest institutions in New York, many of whom have never before been identified in any way with the development of the iron and steel interests of the South, and also leading financial interests of England and Canada. This committee, which finally organized through a combination of two committees that have been at work on the matter for months, is composed of Cecil A. Grenfell, chairman; Alexander J. Hemphill, president of Guaranty Trust Co.; John W. Platten, president of United States Mortgage & Trust Co.; Edwin G. Merrill, president of Union Trust Co.; Benjamin Strong, Jr., president Bankers' Trust Co.; Harry Bronner of Halgarten & Co., bankers; Melville G. Higham of Post & Flagg; H. L. Melville, president Canadian Northern Railroad, and S. H. Voorhees. The counsel are Samuel Untermyer and Albert Rathbone. The depository will be the Bankers' Trust Co. of New York. A voting trust for the new securities will be composed of Cecil A. Grenfell, Pliny Fisk of Harvey Fisk & Sons, Henry L. Melville, president of Canadian Northern Railroad; Alexander J. Hemphill, president of Guaranty Trust Co., and Edwin G. Merrill, president Union Trust Co.

The trust companies represented are among the greatest financial institutions in the United States. Harvey Fisk & Sons are bankers of international reputation, and their identification with this combination should prove exceedingly valuable to the South. Halgarten & Co. have already been largely interested in finding capital for Southern coal and iron interests. It is likewise of very great importance to this section that strong Canadian interests, which have for some months been becoming more and more closely identified with Southern development, are represented on this board, and will be active factors in working out the plans.

The consolidation of these two properties is the most important movement in the development of the iron and steel interests of the South since the purchase of the Tennessee Coal, Iron & Railroad Co. by the United States Steel Corporation. It means that the new company, which will have a capitalization of about \$30,000,000, will own eight furnaces and a modern steel plant which is today in very successful operation, and which by a moderate expenditure can increase its production to a daily output of finished steel of 600 or more tons. The two Alabama Consolidated furnaces at Gadsden, a short distance from the steel plant of the Southern Iron & Steel Co., will be able to deliver molten iron to the latter, thus giving to these furnaces an immediate market for their output and furnishing to the steel plant an ample supply of basic pig-iron to enable it to run at full capacity without remelting its iron.

These companies own over 75,000 acres of coal land, of which over 30,000 acres are in the Warrior field, accessible to deep-water navigation to the Gulf, which the Government is now completing after an expenditure of some millions of dollars, and which will enable this company to float coal direct from its property to Mobile, and thence by water to New Orleans and other Gulf ports without reshipping. They also own 75,000 to 80,000 acres of iron-ore lands in Alabama and Georgia, with eight blast furnaces, a thoroughly modern steel plant, upon which over \$3,000,000 has been expended, and which is in active operation, but which is to be greatly enlarged, and about 1800 coke ovens. The steel plant and three furnaces are located at Gadsden, Ala.; two furnaces at Ironaton, Ala.; one near Birmingham, one at Chattanooga, and one in Georgia.

There is probably no more logical economic combination possible among the iron and coal interests of the South than the amalgamation of these two companies. With the combination effected, backed by the financial people now identified with it, and additional capital provided for the further extension of the steel plant and the larger development of coal mining, in order to fully utilize the vast supplies of coal available for shipment by water to Gulf ports, as well as for coke-making, the new company has the foundation for becoming one of the foremost of the great iron and steel-making interests of the entire country. For, with the start it now has, backed by the financial influences connected with it, ample capital ought to be available for future extensions as the demands of trade may require. A new company is to be formed to acquire the prop-

erty of both companies subject to about \$2,000,000 underlying bonds on each property. The new company will issue \$5,000,000 6 per cent. bonds, \$12,500,000 6 per cent. cumulative preferred stock and \$12,500,000 common stock, or \$30,000,000 new securities in all for this purpose and for raising \$4,130,000 additional cash capital.

These new securities will be distributed on the following basis: Holders of the first refunding bonds of the Southern Iron & Steel Co. will receive 80 per cent. in new preferred stock and 20 per cent. in new common stock; debenture holders, 60 per cent. in new preferred stock and 40 per cent. in new common stock; one-year noteholders, 100 per cent. in new bonds, 25 per cent. in new preferred stock and 100 per cent. in new common stock; preferred stockholders, 20 per cent. in new common stock, and common stockholders 5 per cent. in new common stock.

Preferred stockholders of the Alabama Consolidated Coal & Iron Co. will receive 150 per cent. in new preferred stock; common stockholders, 122 per cent. in new preferred and 115 per cent. in new common stock.

There will be offered for subscription for the aggregate sum of \$4,130,000 in cash \$4,130,000 new bonds, \$1,032,500 new preferred stock and \$4,130,000 new common stock. The depositing preferred and common stockholders of the Southern Iron & Steel Co. and the common stockholders of the Alabama Consolidated Coal & Iron Co. will have the right to subscribe for these new securities. The preferred stockholders of the Southern Iron & Steel Co. will have the privilege of supplying \$1,180,000 of the amount of cash required, the common stockholders of the Southern Iron & Steel Co. \$950,000, and the common stockholders of the Alabama Consolidated Coal & Iron Co. \$2,000,000. The depository will be the Bankers' Trust Co. of New York.

In its announcement to the security-holders of the two companies the committee says that it has been furnished with:

"(1) Appraisals of the comparative values of the physical properties of both companies by Mr. Charles Catlett;

"(2) A report on the steel plant of the Southern Company by Mr. Alexis W. Thompson;

"(3) Reports with respect to the financial requirements of the merger for improvements and betterments, the completion of the finishing mills of the Southern Company and for working capital, and

"(4) Balance sheets of both companies."

And then it adds:

"After full consideration of the subject in the light of the above reports and as a result of other investigations, the committee is unanimously of opinion that the properties of both companies can be operated and financed more economically and are appreciably more valuable as a single unit than the same properties when operated separately and as two distinct enterprises. It, therefore, recommends the merger of the two companies through the acquisition of their respective properties or such securities thereof as the committee shall deem sufficient to ensure practical control or the properties of one company and such securities of the other company by a new corporation on the basis hereinafter specified, which it believes to be fair to all classes of security-holders and creditors of both companies."

A tract of 800 acres of land near Asheville, N. C., is to be planted in apple trees at the rate of 1000 trees a year for 10 years.

BUILDING A MINING TOWN.

Remarkable and Rapid Development Proceeding on the Consolidation's Tract in Kentucky.

Further information received about the great development which the Consolidation Coal Co. is engaged upon in the Elkhorn coking-coal region at and around Jenkins, Ky.—which is a new town that the coal company is building in connection with its very extensive operations there—show that rapid progress has been and is being made toward the attainment of its plans. There will be about 2000 houses in the town, and the Nicola Building Co. of Pittsburg, which has charge of the building operations, has already erected more than a hundred of them. A clubhouse for the officers and engineers of the coal company is practically finished. It is a two-story building of attractive appearance. Foundations have been completed for a central store (the business of which is now being conducted in temporary quarters), for a bank and post-office building and for an office building of the Consolidation Company. The building company does everything in connection with the construction of dwellings and other structures in the new town. It cuts the timber in the adjacent forests, saws and planes it into lumber, and is thus able to get most of its materials on the ground, it being only necessary to purchase the millwork—such as windows and doors—and also roofing, nails and paint. There is also a brickyard at Jenkins, and it is equipped with a steam drier so that bricks can be manufactured in the winter. The yard is run by electricity from the lighting plant. A limekiln is another feature of the place; it is already in operation. There are three sawmills on Elkhorn Creek and a large band mill on Wright's Fork. All of them have planers and dry-kilns, and the lumbering is done under the direction of an experienced forester, so that no waste is permitted. Even limbs of trees are used for mine ties. The best poplar timber is being stored for sale after the railroad (the Sandy Valley & Elkhorn, 28 miles long and running from Jenkins down to Shelby, Ky., on the Chesapeake & Ohio Railway) is completed.

The town now has a bank, one having been established several weeks ago under a national charter. It is known as the Jenkins National Bank, and was a necessity, as the nearest bank was 25 miles away. The new institution is said to be of great value to the region, as it conducts a general banking business in addition to the business in connection with the town and the officials and employees of the coal company. The deposits are said to be rapidly increasing. There is also a postoffice with a daily mail service between Jenkins and Hellier, Ky., between which points two hacks run carrying passengers and mails.

The temporary central store is reported to have transacted nearly \$12,000 worth of business during August. Three other stores are being started—one on Lower Elkhorn Creek, one on Upper Elkhorn and the other on Wright's Fork. An ice plant has been operating all summer.

Pending the completion of the railroad, supplies are being hauled to Jenkins on teams, which convey them from a narrow-gauge railroad that connects at Glamorgan, Va., with the Norfolk & Western Railway. There were recently 78 teams engaged in thus hauling material over the mountains.

The clubhouse is situated near Camp Crawford, which is the temporary residence of the manager. The ground there has been laid out into lots upon which will be erected cottages for the manager, the superintendents, engineers, clerks, etc.

The company has built and graded roads through its property, as the existing roads could not be used in bad weather for heavy loads. A stone crusher has been erected. A meat shop is also in operation, the butchering being done in the town, as the haul is too long and tedious to get fresh meats from other points. Three permanent stables have been erected and are in use, caring for a total of 150 horses.

It is planned to build a temporary Y. M. C. A. building with a pool and billiard room, bowling alleys, a barber shop, shower baths, a reading-room and other attractions. A moving-picture show is also to be established for operation during the winter to provide recreation and amusement for the men. There are already about 1000 employees in and around Jenkins, but it is stated that good order has been maintained, their conduct being above reproach.

To provide drinking water success has been had with wells, about 50 being drilled, all giving good water, and the lower end of Little Elkhorn Creek has been cleared for a reservoir to contain 70,000,000 gallons of water, or a supply sufficient for the entire plant for 200 days. The dam is being built. Another dam is also being erected for a reservoir across Goodwater Branch, immediately back of Camp Crawford. It will contain 1,200,000 gallons of water, which will be used for drinking and cooking purposes.

On the railroad the grading and excavating is about 85 per cent. completed, and the bridge masonry is proportionately advanced. It is consequently expected that the line will be finished as rapidly as the bridge can be erected.

As for the mining development, it has been proceeding for four months. On main Elkhorn Creek eight mines are located, which are expected to have an output of 12,000 to 15,000 tons per day, and the workings are projected. The coal has been faced for the openings and the headings started on seven of the mines. On Wright's Fork several mines will also be opened with a capacity about the same as the others. They will be reached by the Louisville & Nashville Railroad extension now building. Grading the mine openings and starting the headings will begin within two months. These developments are in Letcher county, Kentucky, Jenkins being several miles east of Whitesburg, which is the county-seat.

Thoroughly characteristic of the spirit that has brought Tulsa, Okla., in 10 years from a village of 1390 inhabitants to a city of more than 25,000 population is a paper by Dr. Fred S. Clinton, published in the Journal of the Oklahoma State Medical Association, and now reprinted for wider circulation. It deals with the definite facts of Tulsa's progress, with an exceedingly interesting comparison of conditions there today and those of 1836, when Archie Yahola, a full-blood Creek Indian from Georgia, became the first settler.

The building permit has been issued for the new union station at Kansas City, and a report from there says that the estimated cost of the structure is \$4,051,000. The George A. Fuller Company is the contractor, and the owner is the Kansas City Terminal Railway Co. The work is to be done by September 30, 1913. The permit covers the main building, the express offices, the train sheds and immediate outbuildings, but does not include the electric plant and equipment.

W. L. Martin of Marshall, Tex., is reported as planning to use dynamite in breaking up the subsoil of his farm that cannot be reached by the plow.



NEW POWHATAN HOTEL, WASHINGTON.

To be erected; cost \$350,000; Milburn, Heister & Co., Washington, architects; George A. Fuller Company, New York and Washington, contractor.

TO FACILITATE EXPORTS.

A Government Circular for Benefit of Interior Shippers.

At the suggestion of the secretary of the Merchants' Association of New York city, Hon. O. P. Austin, chief of the Bureau of Statistics of the National Department of Commerce and Labor, has prepared a circular for free distribution upon request among exporters and others designed to facilitate the business of interior shippers of merchandise for exportation at interior ports. In addition to quoting laws and customs regulations bearing upon the subject, the circular says:

"Attention of exporters is called to the importance of extreme care in properly and fully describing merchandise offered for exportation. This necessity is especially apparent in the case of merchandise forwarded from interior points to the exporting ports to be there 'manifested' (or described for exportation) by the export agent, transportation company or steamship line to which it is consigned. Such merchandise is often so insufficiently described by the owners or consignors as to prevent its proper description by those presenting it for exportation. Persons forwarding merchandise for exportation should realize that all articles not fully and properly described are liable to encounter serious delay at the export port, as the customs authorities are required to insist upon a proper description, including quantity and value of the various articles, in the form of an export manifest, before a clearance shall be granted to the vessel on which the merchandise is to be exported."

"In describing merchandise give the name of every article, using the trade terms. State weight in 'net' terms, omitting any weight of box, barrel or other container; the ton, where named, 2240 pounds. Make no groups under vague and useless titles, such as 'merchandise,' 'manufactures,' 'machinery,' 'metals' or 'all other,' as such general descriptions will not satisfy the collectors of customs, who, under the law above quoted, before a clearance shall be granted, shall require manifests which shall specify the kinds, quantities and values of the merchandise to be exported. The following suggestions

are intended to serve as illustrations of the detail in which merchandise forwarded for exportation shall be described:

"Agricultural Implements—State separately—mowers and reapers; planters and seeders; plows and cultivators; threshers (including parts thereof in each case); hay rakes; tedders; hoes; shovels, etc.

"Machinery—Adding machines; brewers' machinery; cash registers; electrical machinery; laundry machinery; metal-working machinery; mining machinery; printing presses; pumps and pumping machinery; refrigerating and icemaking machinery; sewing machines; show machinery; sugar-mill machinery; typewriters; windmills; sawmill machinery, and all other forms of machinery by name."

Solve the Slack-Coal Problem by Briquetting.

The problem of the satisfactory disposal of slack coal has been a long-standing and troublesome one for coal-mine operators, for which the successfully-demonstrated and profitably-used briquetting machinery promises a speedy and satisfactory solution. When an increased demand for lump coal occurs it results in an increased production of its by-product, slack coal, which, being placed on the market at the same time, must frequently be sold at a sacrifice at 30 cents to 75 cents per ton. One writer on this point says: "If we could destroy the surplus slack that goes out and plays havoc with the open market and the contract business, the result would be good." Some of the companies stock their slack coal until a fair price prevails. This is expensive and troublesome as compared with converting it into briquettes or "boulets," which in some cases have a market value considerably above the lump coal from which the slack is obtained. This fact was brought out in the description of Devilliers' briquetting process as it is working at a Maryland coal mine, as noted in the MANUFACTURERS RECORD of last week.

The process of briquetting with the machinery necessary has been perfected in foreign countries, and is now made applicable to American coal and coal-mining conditions by Robert Devilliers, whose fac-

tory and office are at the foot of Court street, Brooklyn, N. Y. This briquette coal has many advantages which makes it applicable to use as stove coal, for fireplaces, furnaces, etc. It can be used to advantage in the place of anthracite in many cases, considering its lower price as compared with anthracite coal. The introduction of this briquetting machinery into the American coal-mining industry should prove a benefit to the producer in giving value to a waste product, and to the consumer in giving a satisfactory fuel at a reasonable cost.

To Develop Mineral Lands.

[Special Cor. Manufacturers Record.]

Atlanta, Ga., October 7.

According to plans which are maturing rapidly, the formation of an Atlanta company will play an important part in the development of 3643 acres of mineral lands in Walker county, Georgia, the main part of which is situated about two miles and a half west of Lafayette. The company that will develop this property has petitioned for a charter in Fulton county under the name of the Horine Development Co., naming a capital stock of \$200,000, with privilege of increasing same to \$1,000,000, and with E. M. Horine, Henry L. Degive, E. Lee Worsham and George M. Napier, all of Atlanta, as the principal stockholders. The tract is reported to be rich in cement rock, and there is in easy reach of the logical location of a cement plant coal suitable for burning that could be mined at a cost of \$1 per ton.

After organization the company proposes to establish first a large cement and lime works; then, to accommodate the large number of employees who will be attracted to that part of the country, a townsitite in the middle of the valley will be developed. The land still unused will be planted in fruit trees and used for agricultural purposes. This will doubtless be the main line of endeavor for the first years on the part of the company, but there are other items that the charter calls for which, aside from the mining and manufacturing pursuits, range from operating commissaries to developing hydro-electric powers. One of the leading movers in securing the charter is Mr. E. Lee Worsham, State entomologist, who was first to take active steps for developing this Walker county property, and he will be one of the leading members of the company.

ROY G. BOOKER.

Testing Materials Congress.

The sixth Congress of the International Association for Testing Materials will be held at the Engineering Societies Building, New York city, in the week of September 2, 1912. One of the most important functions of this body is the establishment of standard specifications for materials used in manufacture and construction, and, since the purposes of the body are practical rather than scientific, its work involves in large measure the study and discussion of the properties of materials and the various kinds of service in which constructive materials are used. It indicates the very wide field to be covered by the technical papers at the congress, which has three great subdivisions, dealing, respectively, with metals, stone, cement and artificial stone and miscellaneous materials. The organizing committee for the congress has Henry M. Howe, Bedford Hills, N. Y., president; Robert W. Lesley, Philadelphia, vice-president; H. F. J. Porter, No. 1 Madison Ave., New York city, secretary, and Edgar Marburg, Philadelphia, treasurer.

It is estimated that Oklahoma produces 75 per cent. of the broom corn of the country.

HIGH POINT'S INDUSTRIES.

Many Enterprises in a Great Furniture Manufacturing Center.

[Special Cor. Manufacturers Record.]

High Point, N. C., October 9.

This thriving little industrial city of North Carolina seems like a miniature metropolis in the activity displayed by its citizens in various avenues of business life, especially in manufacturing, of which the principal product is furniture of all kinds. Because of this specialty High Point has become well known all over the United States as a center of the furniture industry. In the furniture district raw materials in the shape of lumber and hardware is constantly being received, and the finished product is loaded into the cars of the Southern Railway for shipment to all parts of the country. These plants' needs in new machinery and repairs are largely met by the local machine shops, there being works for constructing, rebuilding and repairing boilers, engines and woodworking machines, besides laundry apparatus, dyeing equipment, etc.

There are about 70 industrial enterprises in High Point. These include the Central Foundry and Machine Works, the Southern Car Co., the Standard Mirror Co., the Southern Metallic Bed Co., the High Point Hosiery Mills, Stehl & Co.'s silk mill, the Durham Hosiery Mills No. 2, the Pickett Cotton Mills, the High Point Buggy Co., the High Point Bed Spring Co., the High Point Paint Works, the Parker Paper & Twine Co., the Shipman Organ Co. and others.

That furniture is not commanding all the attention of the manufacturers here is evident by a consideration of the titles of these enterprises, and other High Point manufactures, including shuttle blocks, mirror plates, bricks, coffins, molding, ice, overalls, trousers, hubs, wheels, handles, veneers, plate glass, showcases, etc. Chairs, tables, beds, desks, bedroom sets and chiffoniers are the principal classes of furniture made in the furniture factories, of which there are nearly 30. The Continental, Home, High Point, Alma, Best Tomlinson, Tate, Union, Welch, Ward, Southern, Marsh and Columbia furniture plants are some of them.

The Southern Machine Works, of which H. L. Freeman is proprietor, is now engaged in building an automatic machine for bending metal parts for beds, this having been ordered by the Southern Metallic Bed Co. Mr. Freeman has lately invented and completed a machine for laundry drying and for dyeing hosiery and raw stock. Another Freeman invention is for gold mines, and is only built to order. The drying and dyeing machine is to be offered to the general trade. General machine work is also given attention at the Freeman plant.

An extension of furniture manufacturing interests here has been effected by the Tomlinson Chair Manufacturing Co.'s increasing its capital stock from \$250,000 to \$750,000 in connection with a consolidation with the Globe-Home Furniture Co. The Tomlinson plant has had an annual capacity of 1,000,000 chairs, but this year will considerably exceed that number. Its product is marketed mainly in the South, and the Globe-Home product has been sold mainly between here and Boston. In future the Globe-Home plant will make a general line of furniture for both Southern and Northern trade. An improvement accompanying this merging of interests is the erection of a five-story mill-construction building about 200 feet long by 60 feet wide, of brick, costing from \$25,000 to \$30,000, and for which contract has been awarded to Mr. Caldwell of Asheboro, N. C. The two plants will be

continued under the name of the Tomlinson Chair Manufacturing Co., the active managers of which are C. F. Tomlinson, general manager, and S. H. Tomlinson, secretary-treasurer.

The Pickett Cotton Mills, which has been under construction at High Point, N. C., since early this year, will be ready with its 12,000 spindles and 300 looms to manufacture before January. The machinery is now being received for installation. The buildings include the main mill, two stories high and 100 feet wide by 300 feet long, and the cotton warehouse, two stories high, 50x100 feet. The main mill is of standard brick mill construction, with brick piers and concrete panels, instead of the brick arches common in this class of construction. On the north end of this building is the picker-room, divided from the weaveroom by fire walls. On the south end is the slasher-room, also divided from the main room by fire walls. The top floor of the warehouse is on a level with the car doors on a spur of the Southern Railway, so that the raw staple will be readily and economically handled. The cotton-opening room is in one end of this warehouse, but is protected by fire walls, and the cotton will be blown in pipes to the picker-room in the main building across the railway tracks. Electric power will be used throughout except for heating and slashing, a 125-horse-power boiler having been purchased for this purpose. Local transmission lines from the substation of the Southern Power Co. of Charlotte will furnish the electricity, the latter being generated at Great Falls, many miles distant in South Carolina. The spindles, on the second floor, will be driven from the rafters, and the looms, on the first floor, will be driven from the basement. The water supply and fire-protecting equipment will include a 1000-gallon-per-minute fire pump, a 50,000-gallon tank on a 100-foot tower, a 400,000-gallon reservoir and a sprinkler system. The staircase in the main building is built in a brick tower separated from the main building by automatic fire doors. It is evident that every effort has been made to provide all that invention and manufacture offers to protect this plant from damage by fire. The Pickett company is capitalized at \$400,000, and its product will be a good quality of print cloth for shirting. About 125 operatives will be required for the initial equipment, but the company anticipates doubling the machinery in future, and with this in view has had the south end of the mill so finished that it can readily be taken out and the structure extended.

The Central Carolina Construction Co. of Greensboro has the building contract. The looms are being furnished by the Stafford Company of Readville, Mass., and the spinning equipment by the Howard & Bulloch American Machine Co. of Pawtucket, R. I.

Pickett Cotton Mills' officers are Robert L. Steele of Rockingham, a well-known cotton manufacturer, president; W. P. Pickett, formerly owner of a large tobacco factory, first vice-president; J. J. Welch, second vice-president; F. M. Pickett, who was interested with his brother in the tobacco factory mentioned, secretary-treasurer. Messrs. Pickett, Welch, J. W. Harris and J. Elwood Cox (president of the Commercial National Bank) are the finance committee. J. F. Wardlaw is here representing R. A. Thayer of Greenville, S. C., district engineer for Lockwood, Greene & Co., the Boston mill architects.

The Piedmont Cotton Mills (details of which were formerly announced by the MANUFACTURERS RECORD) will soon be ready to manufacture. Another big textile enterprise is the Durham Hosiery Mills No. 2. Stehl & Co. (who have silk mills

in the North) are now weaving silk at their High Point plant, having recently erected an additional building and installed the necessary looms.

The Southern Car Co. is building an electric railway dining-car for the interurban system now being constructed in the Carolinas by the Dukes and their associates. Abram Cook, who, I am informed, was formerly with a St. Louis car works, is in charge of the Southern Car Co. works. He is secretary-treasurer of the company. The Pittsburgh (Pa.) Plate Glass Co. has a factory here, the output being largely purchased for use in connection with High Point furniture. It shows its faith in High Point by operating this branch plant.

The municipality is making considerable public utility improvements, under the direction of Mayor Fred N. Tate (of the Continental Furniture Co. and other enterprises). Bonds to the amount of \$100,000 were voted some months ago by the people, and \$50,000 worth have been sold. The proceeds are being expended about as follows: \$20,000 for macadamizing; \$20,000 for water and sewer extensions; \$10,000 for additional school building. The other \$50,000 of bonds will be offered for sale in January and the money will be spent during 1912 about as follows: \$25,000 for streets; \$25,000 for water and sewers. D. H. Hall is the contractor for the street work now progressing, and he has two quarries within the city limits. Some 20,000 feet of curbing is being used, and a portion of it is being shipped here from Salisbury quarries. The J. B. McRary Company of Atlanta is the engineer for the present water and street improvements. Water pipe is being furnished by the Glamorgan Pipe & Foundry Co. of Lynchburg; sewer pipe by the Pomona (N. C.) Terra-Cotta Co.; hydrants and valves by the R. D. Wood Company of Philadelphia; 2,000,000-gallon pump by the Laidlaw-Dunn-Gordon Company of Cincinnati, and 150-horse-power boiler by the Casey-Hedges Company of Chattanooga.

Mayor Tate and the other leading business men here are determined that High Point shall be entirely modern in its municipal improvements, so that the city's 11,000 to 12,000 inhabitants will have that local and justifiable pride that promotes comfort and health and is an incentive to effort. A modern hospital is one of the new institutions now talked of. A modern theater and a completely equipped market are needed. Therefore, some action in this direction may be expected.

High Point is typical of what Southern energy and capital can accomplish for a city, practically all the industries here having been established and developed to their present extent by High Point people. It may be pertinently added that the energy made the capital.

H. C. CALDWELL.

The Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., October 10.

The transactions recorded in the pig-iron market during the past week do not indicate that a further decline in prices has been suffered, but the market was not very active. Mention is made of a sale of 500 tons of a special analysis iron for delivery during the remainder of the year at \$12 per ton Birmingham, and an aggregate of 600 tons of No. 2 soft of a favorite brand is reported sold at \$10.50 per ton f. o. b. cars Birmingham. The largest sale reported for the week was a lot of 750 tons of No. 2 soft for comparatively early shipment, which brought \$10.25 per

ton at furnace. With these exceptions, the demand was principally for carload lots with a basis of \$10.25 per ton the consideration in the majority of cases. An inquiry for some 15,000 tons, for delivery to extend into next year, was submitted, but it is understood that so far no part of that tonnage has been placed. Stock reports of October 1 show the aggregate accumulation to have been reduced, and as there is still no likelihood of an early increase in the rate of production, a better feeling in the matter of prices prevails among local selling interests. It is pointed out that melters have in but few cases provided for their requirements after January 1, and that, notwithstanding the tonnage that has been held up on contracts, the actual movement from furnace yards has for three months past exceeded the rate of production. There is considerable speculation as to just what prices will be obtained for first-quarter shipments. In spite of the conditions existing, producers generally are disposed to submit quotations on advanced deliveries with reluctance, and even the merchant interests are not solicitous of contracts in which the delivery covers a longer period than 60 to 90 days.

In the cast-iron-pipe industry announcement is made of a round tonnage of water pipe soon to be placed for requirement at Los Angeles, Cal. It is understood that the requirement for Kansas City, Mo., previously mentioned, will be furnished by the United States Cast Iron Pipe & Foundry Co. This concern will, during this week, forward the last of 8000 tons of water pipe, purchased some time past, for the requirement at San Diego, Cal. It is noted that this tonnage just mentioned was produced at the Bessemer (Ala.) plant of the company, and that the tonnage was so assembled as to have been forwarded in trainloads of from 1500 to 2000 tons each. The volume of small orders placed with local pipe producers since last report was fairly attractive, and prices have not been lowered. The market is quoted as follows per net ton f. o. b. cars here for class "B" or water pipe: Four-inch to 6-inch, \$23; 8-inch to 12-inch, \$22; over 12-inch, average \$21, with \$1 per ton extra for class "A" or gas pipe.

Dealers in old material have succeeded in maintaining prices to a certain extent, although very little tonnage has been offered and no sale of round lots has recently been made. In view of this, the status of prices is uncertain. Quotations are nominally as follows per gross ton f. o. b. cars here:

Old iron axles, standard, \$15.50 to \$16.
Old iron axles, small, \$12 to \$13.50.
Old steel axles, light, \$13 to \$13.50.
Old steel axles, standard, \$14 to \$14.50.
Old iron rails, \$13 to \$14.

No. 1 railroad wrought, \$11.50 to \$12.
No. 2 railroad wrought, \$8 to \$8.50.

No. 1 country, \$7 to \$7.50.
No. 2 country, \$6.50 to \$7.
No. 1 machinery, \$8.50 to \$9.
Standard car wheels, \$11 to \$11.50.
Tram car wheels, \$8 to \$8.50.

Light cast and stove plates, \$7 to \$7.50.

The market for light rails is very inactive and prices are considered nominal. With the extension of mine operations that has been effected within the past 60 to 90 days a very attractive tonnage of this material has been involved. However, a large quantity of relaying rails has been on the market for some time past, and has, in the majority of cases, met the demand for the requirement in those sizes weighing less than 30 pounds per foot. We quote 12-pound rails at \$28 per ton net

f. o. b. cars here, with 16, 20 and 30-pound rails quotable at \$27 per net ton.

The demand for all grades of steam coal has for some weeks past been very satisfactory. A large percentage of the operators are now behind on orders, and, quite contrary to expectations, a shortage in railway equipment is noted. The best grades of run-of-mine steam coal are quotable at from \$1.50 to \$1.65 per net ton at mines. In the coke market a fairly attractive volume of business is being transacted, with prices very firm. Standard Alabama 72-hour foundry coke is quotable at from \$3.25 to \$3.50 per net ton at Birmingham district ovens.

Literary Notes.

Garden Planning. By W. S. Rogers. Publishers, Doubleday, Page & Co., Garden City, N. Y. Price \$1.10.

This volume, one of a series of practical works known as the "Garden Library," is designed for the use of the individual who plans to develop his own garden without the services of a professional garden designer. The subject of garden planting has heretofore had meager consideration in comparison with the treatment of the more mechanical phases of gardening, such as planting, cultivating, etc. It comes at an opportune time when there is such a strong inclination among city dwellers to get away to the country and plant a garden. Of course, one's taste and judgment will ultimately determine the appearance of his garden, but this volume enables him to familiarize himself with the principles, the methods and probable results. In separate chapters are discussed the factors of garden planting in detail, the rectilinear principle, the elements of the plan, beds and borders, walks and drives, grass as a foundation, sloping gardens, the rock garden, the rose garden, the vegetable garden, water, glass, fences and hedges, tile and other artificial edgings, accessories and the garden and the flower. An appendix contains lists of various flowers and shrubs, fertilizers for special purposes and articles on garden geometry and garden tools and appliances. More than 125 illustrations are helpful to the student.

The Principles of Industrial Management. By John C. Duncan, M. S., Ph.D. Publishers, D. Appleton & Co., New York. Sixty illustrations, 323 pages. Price \$2.

Dr. Duncan, the author, a member of the faculty of the University of Illinois, has sought to give to the young men in school and college a clear conception of the principles underlying the successful conduct of industrial enterprises. The material is compiled from many sources, including the large and successful industrial plants of the country. The book is valuable for practical business men as well as for students. One object of the author is that the facts presented may be of service to students of accountancy as well as those of general business, since the accountant should be able to appreciate the kind of information which the management needs and the extent to which accounting records may be of value in providing various kinds of information.

A dispatch from Galveston says that the Galveston Wharf Co. has opened Pier 39 for service. It is 1200 feet long, the width ranging from 300 feet at one end to 150 feet at the other. It has a reinforced-concrete, fireproof wharf shed and cost about \$200,000. James Stewart & Co. erected the building.

The Virginian Railway shipped from its terminals at Norfolk during September 181,941 tons of coal.

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive brief items of news about business conditions, opportunities for industrial enterprises and the projected establishment of enterprises in every town in the South. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South. This information is desired for publication without cost of any kind to the sender, and regardless of whether he is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. This department is open only to news facts of interest to investors, homeseekers and manufacturers. Correspondents are requested to give their facts in as condensed form as possible, preferably not over 200 to 250 words. Lengthy letters cannot be published.

STATESVILLE ALERT.

Commercial Club,
Statesville, N. C., October 3.

Editor Manufacturers Record:

A bond issue for good roads to the amount of \$400,000, ratified at the polls on May 9, put Iredell in the forefront of North Carolina counties. A portion of the bonds has been sold at a good price and the proceeds are being used on the roads now. It is figured that when the total amount is used up we will have about 200 to 250 miles of good roads of macadam, sand clay, soil or whatever material suits the different conditions, as recommended by the county engineer, who will see that the money is spent to the best advantage.

Construction of a bridge spanning the Catawba River, so that the farmers of Catawba county can get to this city with their produce, is going ahead.

It is expected that the grading of the Statesville Air Line Railway, the new road to Mt. Airy, N. C., will be completed to the Yadkin River by the first of the year, when the rails will begin to be laid.

Statesville this year has put down several miles of sidewalk improvement at a big cost to the city, and the first of next year will begin to permanently improve the streets, using bitulithic pavement or some similar composition. The property-owners have part of the cost to pay on the street work.

Iredell county can raise all the necessities of life and raise and manufacture most of the necessities and comforts. One important factor in the advancement of the farming interest of Iredell county has been the establishment of the State experiment farm, two miles from the city, under the management of Mr. F. T. Meacham, a thorough farmer. As a result, lands that a few years ago were considered worthless are now producing a bale of cotton per acre at a cost of \$31.70, for which the farmer realizes about \$80. Corn yields about 40 bushels per acre and costs to raise about \$19.50, which gives a return of about \$34. Wheat and oats yield about the same proportionate profits.

Statesville, through the Commercial Club, is anxious to tell the people who are dissatisfied with their present locations some of the advantages of our section, and will be glad to answer any questions looking toward filling our county up with a good class of farmers.

W. L. GILBERT, Secretary.

IN MIDST OF RESOURCES.

Atoka, Okla., October 10.

Editor Manufacturers Record:

This village is 50 miles from Texas and 100 miles from Arkansas, and on the main line of the Missouri, Kansas & Texas Railway, with branch line to Oklahoma City. Atoka has a population of 3000. Developed coal mines are five miles from town, and unlimited timber is to the east and prairie on the west. Thousands of acres of farms being rapidly placed under cultivation. A hardwood plant is now being operated by a competent management, and the company contemplates adding

other machinery to the present plant in the near future.

The Hugo-Atoka Railway, recently chartered, is now getting the grading machinery on the ground, and will begin actual dirt-throwing within a few weeks.

Over 10,000 acres of oil leases have been taken by Texas and Oklahoma companies within 4 to 20 miles northeast of Atoka in the last three weeks. The Atoka Oil & Gas Co. is now putting down a deep well eight miles south of town, and is some 800 feet deep at this date.

The Moulton asphalt mine, 14 miles northeast of town, is now a steady shipper, and many other prospects in same neighborhood are being developed.

D. H. Linebaugh of this city is now preparing his plans for the erection of a 40-room modern hotel on one of the best corners of Atoka.

The Atoka Ice & Power Co. will increase its capacity 100 per cent. this winter.

We want a brick plant, a canning plant and lime and cement works.

Cotton and corn are now coming in, and both gins are rushed to their limit, cotton being much better than expected, which also applies to corn and other crops, hay especially being good.

I have recently found a species of clay one mile from Atoka that is free from sand, and when thrown out to the sun it takes on a glaze, looking much as if it had been subjected to fire, and is a beautiful brown. I am of the opinion that it would make the best of pottery. The strata is some 20 feet thick, and is found four feet from a level surface.

E. A. NEWMAN.

ALERT AT HASTINGS.

Hastings, Fla., October 3.

Editor Manufacturers Record:

We have already a sewer system in, but it will have to be enlarged later and also extended. This town has only been incorporated about two years, and, of course, we are having to go somewhat slow with improvements in order to stay within bounds of our means.

Later on we may decide to put in an electric-light plant and other improvements looking to the betterment of conditions, and when we do I will be glad to advise your paper just what we propose doing.

As you are doubtless aware, this is a great farming section, specialty being Irish potatoes, though most anything can be raised here in the way of farm products. It is very thickly settled around here, farms for the most part being of 20 to 40 acres. E. L. WILDER, Mayor.

ENLISTING THE FARMERS.

Chamber of Commerce,

Washington, Ga., October 9.

Editor Manufacturers Record:

This county is situated in one of the richest and most fertile sections of the South, and is capable of producing nearly every agricultural product that can be successfully raised.

Recently the officers and members of the Chamber of Commerce made a "seeing county" trip in automobiles. The entire county was traversed, and nearly every

farmer was paid a personal visit and asked to co-operate with the organization. The result has been the organization of the Wilkes County Agricultural Society, which is working in close conjunction with the Chamber in its efforts of agricultural and industrial development.

JAMES HINES, Secretary

IRRIGATION MADE EASY.

Commercial Club,

Midland, Tex., October 6.

Editor Manufacturers Record:

The recent discovery of an inexhaustible supply of subterranean water only a few feet below the surface of the earth has suddenly made the Midland country a great potential farming section. For a number of years shallow wells, from 10 to 50 feet deep, and flowing from 20 to 100 gallons per minute, have been used for irrigating gardens in this section. The wells recently brought in, however, from the newly-discovered underground reservoir are flowing on an average of 2000 gallons per minute from a depth of 100 to 150 feet. It is due to the investigations of Mr. W. J. Moran of Midland that the water supply has been completely discovered.

Midland, the county-seat of Midland county, is at the south end of the Staked Plains, midway between Fort Worth and El Paso, and has for years been the headquarters of the West Texas cattle industry. Considerable farming has been done with an average rainfall of 15 inches; the soil, a sandy loam, has yielded without irrigation one-half bale of cotton and two tons of milo maize and kafir corn per acre; with the present possibility for irrigating, two bales of cotton to the acre and a corresponding increase in all other crops is assured. With the present shallow wells it costs only from \$3 to \$4 per acre per annum for irrigating.

T. C. CARRINGTON, Secretary.

Detailed Information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 78, 79, 80, and under "Cities, Towns and Railroads Inviting Factories" on pages 110, 111, 112, 113, 114, 115.

Texas Commercial Secretaries.

At last week's convention of the Texas Commercial Secretaries and Business Men's Association at Dallas it was determined to ask Governor Colquitt to appoint a commission to set forth facts affecting the growth and welfare of the State, to promote the construction of good roads, to induce the location of cotton factories, to bring about the conservation of lumber supplies and to bring about conditions for an investment of more outside capital.

For the Inland Waterway.

The convention last week at Morgan City, La., of the men of Louisiana and Texas interested in the intercoastal canal and waterways of those States was an unqualified success. Among the resolutions adopted was one urging Congress to complete at the earliest day a continuous inland waterway nine feet deep and 100 feet wide from the Mississippi River to the Rio Grande.

Builders and Cement.

The National Builders' Supply Association has decided to hold its next annual convention in New York city in conjunction with the second annual cement show, which is to be held from January 29 to February 3. The meeting of this organization in connection with the New York exhibit will mean a very large attendance of the building material interests from all parts of the United States.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Chester, W. Va.—Hancock county voted on \$125,000 bond issue for road improvements.

Jonesboro, Tenn.—Washington county voted to issue \$60,000 of bonds for construction of Washington county link in State highway.

London, Tenn.—Loudon county voted \$25,000 bond issue for road improvements.

Marion, Ala.—Perry county voted \$10,000 bond issue for road construction.

Bonds to Be Voted.

Bainbridge, Ga.—City will vote October 28 on \$15,000 bond issue for paving.

Decaturville, Tenn.—Decatur county will vote November 25 on \$100,000 bond issue for construction of about 99 miles of roads.

Gainsboro, Tenn.—Jackson county will vote on \$150,000 bond issue for road improvements.

Green Cove Springs, Fla.—Clay county will vote in December on bond issue for construction of road.

Madisonville, Tenn.—Monroe county will vote \$150,000 bond issue for road construction.

Selmer, Tenn.—McNairy county will vote November 21 on \$100,000 bond issue for road construction.

Spotsylvania, Va.—Spotsylvania county will vote on \$70,000 bond issue for road construction.

Troy, N. C.—Montgomery county will vote January 9 on \$100,000 bond issue for road construction.

Contracts Awarded.

Aiken, S. C.—City awarded contract at \$13,500 to pave Main street.

Chester, S. C.—Chester county awarded contract to construct sand, clay and gravel road; cost \$5000.

Edgewood, P. O. Wheeling, W. Va.—Town awarded contract to pave Edgington lane.

Florence, S. C.—City awarded contract at about \$50,000 for street paving.

Galveston, Tex.—Galveston county awarded contract for 4900 square yards of vitrified brick paving and for surfacing roadway with mud shell.

Greenville, S. C.—City awarded contract to pave Augusta avenue with asphalt.

Greenville, Tex.—City awarded contract to pave East Lee street.

Little Rock, Ark.—City awarded contract for improvement of West 24th street.

Louisville, Ky.—City awarded contract at \$23,200 to pave portion of Broadway with asphalt.

Lynchburg, Va.—Southern Railway awarded contract to macadamize 17th street.

Monticello, Miss.—Lawrence county awarded contracts for road construction in Beats 1 to 5, inclusive.

Nashville, Tenn.—City awarded contract to construct additional granitoid curbing and sidewalk.

Portsmouth, Va.—Norfolk county awarded contract for construction of sand-clay automobile road.

Tulsa, Okla.—City awarded contract for asphalt and brick paving.

Wharton, Tex.—City awarded contract to construct additional sidewalks at cost of \$4000.

Wheeling, W. Va.—Ohio county awarded contract at \$11,787 to pave Glendale road.

Contracts to Be Awarded.

Alta Loma, Tex.—Galveston county will grade and surface roads with mud shell.

Arcadia, Tex.—Galveston county will grade and surface street with mud shell.

Baltimore, Md.—City will have \$1,000,000 available for constructing about 20 miles paving in 1912, to include Belgian block, vitrified brick, etc.

Birmingham, Ala.—City will pave Eighth avenue with bitulithic.

Camden, Ala.—Wilcox county will grade, drain and surface with gravel about three miles of State-aid road.

Carthage, Mo.—City is preparing plans for paving Carthage public square.

Chattanooga, Tenn.—Hamilton county appropriated \$20,000 for construction and repair of roads on Lookout Mountain.

Gadsden, Ala.—Etowah county will construct road.

Gadsden, Ala.—Etowah county will construct road from Gadsden to Glencoe.

Galveston, Tex.—Galveston, Chambers and Jefferson counties will jointly construct road to connect three counties.

Huntington, W. Va.—City receives bids until November 1 for paving sections of 19th street and Eleventh avenue.

Jacksonville, Fla.—Duval county receives bids until October 20 for clearing and grading Chaserville road.

Little Rock, Ark.—City receives bids until 12 M. October 24 for grading, cubing, draining and paving with asphalt or asphaltic type of pavement.

Louisville, Ky.—City receives bids until October 13 for reconstruction of 4th street.

Louisville, Ky.—City will reconstruct Brook street and Shelby street; cost about \$12,000.

Memphis, Tenn.—Speedway Land Co. will construct additional streets, sidewalks, drain pipes, etc., at Speedway Ter.

Memphis, Tenn.—City will construct concrete walks.

New Orleans, La.—City will reconstruct cut-off road from lower line of Aurora plantation.

Paris, Tenn.—Henry county appropriated \$10,000 for road improvements.

Pensacola, Fla.—City receives bids until November 7 for constructing about 180,000 square yards clay or shale block, sheet asphalt, asphalt block, bitulithic, wood block or concrete paving and 116,000 linear feet concrete curb.

Piedmont, W. Va.—City receives bids until October 21 for grading and paving Fairview street.

Pine Bluff, Ark.—Paving District 27 will construct about 20,000 square yards wood-block pavement.

Richmond, Va.—City appropriated \$5000 for construction of Gordonsville-Richmond-Williamsburg highway.

Scottsboro, Ala.—Jackson county will grade, drain and surface with macadam about two miles of State-aid road.

Stilwell, Okla.—City will construct two miles of sidewalks.

Tuskegee, Ala.—Macon county will construct 10 miles of road.

Southern Appalachian Good Roads.

The third annual convention of the Southern Appalachian Good Roads Association at Roanoke, Va., last week elected

Dr. Joseph Hyde Pratt, Chapel Hill, N. C., president and treasurer; H. B. Varner, Lexington, N. C., secretary, and Cyrus Kehr, Knoxville, Tenn.; Joseph F. Bosworth, Middleboro, Ky.; J. Thompson Brown, Abingdon, Va.; Charles M. Strahan, Athens, Ga.; C. E. Krebs, Charleston, W. Va.; F. H. Hyatt, Columbia, S. C., and E. C. Chambers, Asheville, N. C., vice-presidents. The convention will meet next year at Spartanburg, S. C.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SOUTHERN RAILWAY'S YEAR.

Great Growth and Advancement Along the Lines of a 7000-Mile System.

The seventeenth annual report of the Southern Railway Co. covers the business of the fiscal year ended June 30, 1911. There were 7042 miles of line operated. The gross operating revenues were \$90,345,062, increase \$3,050,534; total operating expenses \$40,926,790, increase \$2,291,044; net operating revenue \$19,418,272, increase \$759,510; net revenue after deducting deficit in outside operations \$19,376,244, increase \$698,502; operating income after payment of taxes \$17,163,276, increase \$512,638; total gross income \$29,455,806, increase \$577,239; total available income after deductions \$17,794,860, increase \$675,363; balance of income over charges \$6,670,003, increase \$912,984; balance over dividends on preferred stock \$5,470,003, decrease \$287,015; balance carried to credit of profit and loss after making deductions for additions and betterments \$5,403,957, decrease \$300,687.

The freight revenues were approximately \$40,000,000, and the passenger revenues over \$16,000,000. The assets amount to \$501,628,353, which includes the road and equipment at \$384,008,913.

Commenting on the progress of the South in its relation to the Southern Railway Co., President W. W. Finley says:

"One of the most important factors in the strength of the company's position is the progressive industrial and agricultural development of the territory traversed by its lines." He notes the census figures showing increase of population at the important points on the system of over 34 per cent. since 1900 and over 75 per cent. since 1890. Continuing, he says:

"A diversified industrial development, based on the foundation of the manufacture of Southern raw materials, is in progress. This development is passing beyond the stage of advancing raw materials through the primary processes of manufacture, and is characterized, to an increasing degree, by the establishment of industries devoted to the conversion of the products of primary manufacturing into articles ready for the final consumers. A notable illustration of this is the multiplication of furniture factories and other woodworking establishments which use as their raw materials the products of the lumber mills of the South. The same tendency is seen in the establishment of plants which draw their raw materials from Southern iron and steel mills, cotton mills and other primary manufacturing industries." He remarks an increase since 1904 of 40 per cent. according to the census in annual value of manufactures in the Southeastern States traversed by the company's lines.

"The development during the year ended June 30, 1911," continues President Finley, "included the completion of 379 industrial plants and additions to 141 existing plants. At the close of the year there were 62 plants under construction. The plants completed during the year included 34 textile mills, 70 lumber mills, 11 furniture factories, 20 other woodworking plants, 24 iron industries, 12 cottonseed-oil mills, 13 fertilizer works, 29 flour and feed mills, 29 stone quarries, coal and other mines, 19 brick works and 118 miscellaneous plants."

Of farming he says: "With climatic and soil advantages unsurpassed by those

of any other part of the United States, the farmers of the Southeastern States are taking up the most approved methods of agriculture with intelligence and zeal. The success with which they are doing this is attested by the statistics of the United States Department of Agriculture, which show increasing yields per acre in each State traversed by the company's lines."

The new double-track line through Lynchburg, Va., was completed during the year and put in use. This, together with a small amount of other construction, gives the company the equivalent of about 50 miles of double track between Monroe and Whittle, Va. The new double track between Citico and Ooltewah Junction, Tenn., has also been finished and put in service. Lap sidings are being constructed at 24 different places to facilitate train movements, and construction has been started since the close of the fiscal year on 38 miles of double track north of Atlanta between Crosskeys and Gainesville, Ga. This, in connection with two five-mile single-track gauntlets, will give the equivalent of 54 miles of double track. Other track and yard work is also mentioned, particulars of which have been published.

The new inbound freight station in Atlanta is expected to be completed early in 1912. Additional wharf facilities are being constructed at Mobile.

Since two years ago the company has acquired and contracted for 198 locomotives, 203 passenger train cars, 5207 freight train cars and 11 pieces of road service equipment. The company's works at Lenoir City, Tenn., also converted 1000 old gondola cars into 800 steel underframe ventilated box cars and 200 refrigerator cars.

LOUISVILLE & NASHVILLE.

Large Increase in Gross Earnings—Important Construction Work In Progress.

The sixtieth annual report of the Louisville & Nashville Railroad Co., which covers the fiscal year ended June 30 last, shows an increase of more than \$4,500,000 in the operating revenues, which have increased more than \$23,000,000, or over 75 per cent., within the last 10 years. The operating revenues for the year under consideration were \$53,993,740 (the largest in the road's history); operating expenses, \$38,479,822 (71.27 per cent. of the revenues); net operating revenues, \$15,513,918. Taxes were \$1,938,089, which left \$13,575,828. Adding to this other income made a total of \$15,595,911. After payment of interest on funded debt, rentals and amounts set aside for sinking funds, there was left \$8,857,568. Deducting from this surplus of the South & North Alabama Railroad, previously included, left the net income carried to profit and loss account \$8,555,332. For comparison it may be noted that the operating revenues last year were \$52,423,381, the operating expenses \$34,985,578 and the net operating revenues \$17,447,803. The operating expenses were 66.72 per cent. of the operating revenues. The company now operates 4621 miles of line. It paid during the past year two dividends of 3½ per cent. each—a total of 7 per cent.—or \$4,200,000. The total surplus now (\$31,513,953) amounts to about 52½ per cent. of the capital, which is \$60,000,000.

It is important to note that of the operating revenues, more than \$39,000,000 were from freight and nearly \$11,650,000 from passenger traffic, the remainder being made up from mail, express and miscellaneous sources. The rise in the operating expenses was mainly composed of an increase of \$1,558,357 in the cost of conducting transportation, an increase of \$1,006,026 in the cost of maintenance of

way and structures and an increase of \$931,655 in the maintenance of equipment.

The Louisville & Nashville has some very important construction work underway, the principal piece being the extension of the Lexington & Eastern Railway about 90 miles to the Elkhorn region in the eastern part of Kentucky. Referring to this, the report says:

"In consideration of prospective traffic, on account of the extension of the Lexington & Eastern Railway to the Elkhorn coal fields, work has been undertaken to reconstruct the Kentucky division between Covington and Paris, Ky., a distance of 78.7 miles. The work undertaken contemplates a double-track low-grade railroad, together with a gravity yard at De Coursey, seven miles south of Cincinnati, and the enlargement of the tunnel at Covington. The grades adopted at 3 per cent. compensated opposed to northbound traffic, and 5 per cent. compensated opposed to southbound traffic. It is expected that the work will be completed by January 1, 1913, and contracts have been let with that end in view."

Of the purchase of the Tellico Railway the following appears in the report:

"In March, 1910, a company was organized under the name of the Athens & Tellico Railway Co., which purchased the property and franchise of the Tellico Railway Co., operating the road to June 30, 1911, under its own organization. The line extends from Athens, Tenn., to Tellico Plains, Tenn., a distance of 22.4 miles, crossing the Louisville & Nashville Railroad at Englewood, Tenn. When the road was purchased it was without terminal facilities at Athens. During the year there has been constructed and put into operation a new entrance into Athens, together with ample terminal facilities. There have also been many trestles filled along the line. The property is now operated as part of the system."

It is further stated:

"The reduction of grades on the Henderson division between Guthrie and Henderson, commenced in the fall of 1909 and referred to in last year's report, is well under way. The preparation of the roadway was completed on June 30, 1911, except for about three miles at Casky, three miles near Crofton, and one mile at Robards. The construction work at Casky and Robards was discontinued during the winter of 1910-1911, in order to lessen interruption of traffic, while the work near Crofton, from its magnitude, required additional time. The track has been laid and is in operation over nearly all of the prepared roadway. The entire work will be completed and in operation in September, 1911 (the report is dated June 30), thus accomplishing the plan, upon which work was begun in 1902, for obtaining lighter grades for the traffic to and from Chicago and the Northwest."

"In March, 1910, construction was commenced of a line to connect the Kentucky Highlands Railroad at Millville with the Louisville & Atlantic Railroad at Versailles, for the purpose of obtaining a more direct route from Louisville to Versailles, Richmond and Kentucky River points, including Irvine and Beattyville. The line was completed and placed in operation on May 1, 1911, the mileage being 9.42."

SEABOARD AIR LINE.

Increases in Both Gross and Net Operating Revenues—Progress of New Work.

The Seaboard Air Line Railway has issued its pamphlet report, covering the fiscal year ended June 30, 1911. It shows gross revenue \$22,606,452, increase as compared with last year \$1,750,078; operating expenses and taxes \$15,909,851, in-

crease \$1,457,168; operating income \$6,606,600, increase \$292,910; total income \$6,754,020, increase \$302,493; surplus income after the payment of interest, rentals, etc., \$1,829,179, increase \$66,073. Out of the surplus there was set aside \$45,000 as a reserve fund for betterments and improvements. The gross revenue increased 8.39 per cent., operating expenses and taxes 10.02 per cent., and operating income 4.64 per cent. as compared with last year. Operating expenses were 66.48 per cent. of gross revenue, and (including taxes) they were 70.23 per cent. of the gross, each being an increase of less than 1 per cent. as compared with last year. The company operates 3046 miles of lines. The report is signed by President N. S. Meldrum.

The freight traffic yielded revenue amounting to \$14,801,968, and the passenger traffic \$4,735,503, the balance being made up by mail, express and miscellaneous business. Of the expenses, \$7,423,677 were for conducting transportation, \$2,836,577 for maintenance of way and structures, \$2,884,953 for maintenance of equipment, and \$818,000 for taxes.

Extensions were completed during the year as follows: Edison Junction to McDowell and Agricola, Fla., 12.34 miles; Nichols to Mulberry, Fla. (including trackage of 1½ miles), 5 miles; spur from the Early Bird Branch to mine of the Dutton Phosphate Co., 1 mile. Construction has been continued on the extension from Fruitville to Venice, Fla., about 17 miles, and a further extension of the Dunnellon line to Inverness and the Holder and Southern Phosphate Co.'s mines is well advanced, the distance being about 8 miles. Construction has also begun on a spur from the South Dunnellon extension to Camp's Bar mines, about 2 miles.

Construction of additional terminal facilities is in progress at Raleigh and Wilmington, N. C., and Savannah, Ga. Improved union passenger station facilities are being provided at Weldon, N. C., and Tampa, Fla. The additions to the terminal facilities at Richmond and Manchester, Va., Wilmington, N. C., and Fernandina and Jacksonville, Fla., were completed during the year. The erection of a steel structure in place of the Lincoln-street trestle at Columbia, S. C., is proceeding, 349 feet of the new structure having been erected, this being in addition to the Lincoln-street viaduct, nearly a mile long. A number of trestles were filled in.

The total assets of the company are \$171,984,751, which includes the road and equipment at \$152,146,731. The capital stock consists of \$37,516,000 common and \$25,000,000 preferred. Profit and loss surplus \$4,112,333.

New Railroad Enterprises.

Among the new railroad enterprises recently reported are the following:

Steer Creek Railroad Co. of Wire Bridge, W. Va., is chartered to build a line from Wire Bridge to Grantsville, W. Va., about 25 miles; capital \$10,000. The incorporators are Cecil Gross of Elkins, W. Va.; G. W. Van Horn of Wire Bridge, E. Bryan Templeman, Charles E. Peddicord and Osman E. Swartz of Clarksburg, W. Va.

Taloga Putnam & Southern Railroad Co. of Taloga, Okla., capital \$100,000, chartered, and proposes to build a line from Chickasha to Woodward, Okla., about 150 miles, the estimated cost being about \$800,000; incorporators, Chas. W. Musgrove, Geo. W. Kouns, J. E. Rudle, L. M. Willey, S. H. Whittenberg, George Sowers, Nett Stidham and F. M. Darby, all of Taloga; C. S. Dunn, Frank Widdel, Perry Skelton, Charles Miller and W. M. Phelps, all of Putnam, Okla.

Rock Island & Dardanelle Railway Co. applied for charter in Arkansas for a line about 14 miles long and covering (it is understood) the route of the old Dardanelle, Ola & Southern Railroad; incorporators, F. S. Yantis, superintendent at Dardanelle, Ark., and Lovick P. Miles, attorney. It is rumored that the Rock Island system may improve and extend the road.

Memphis & Pensacola Railroad. Reports from Meridian, Miss., and Pensacola, Fla., say that Chester H. Pond of Moorehead, Miss.; W. F. Dickinson and George Zeuille of Chicago, Ill.; T. H. Jones of St. Louis, Mo., and B. C. Plumb of London, England, are working on plans to build this long-proposed line. It is said that work is already under way near Tommolen, Miss., progress being made toward Grenada. C. D. Smith & Co. of Memphis are reported to have the general contract, the financing being arranged. The line will be 174 miles from Pensacola to Meridian, 206 miles from Meridian to Memphis and 106 miles thence to Helena, Ark. Considerable of the right of way is secured.

New Equipment, Rails, Etc.

C. V. Shoub, Wellsville, O., who, with others, is about to build the Mobile (Ala.) Interurban Motor Railway, about two miles long, is getting prices on cars and rails.

A dispatch from Bristol says that the Virginia & Southwestern Railway is about to buy six Mikado locomotives, 525 steel coal cars and 50 steel underframe box cars.

The Missouri Pacific Railway has ordered 1900 freight cars from the American Car & Foundry Co., St. Louis, the contract covering 1000 steel gondola cars of 50 tons capacity, 500 flat cars of 40 tons and 400 stock cars of 40 tons. The company also ordered 500 stock cars from the Mt. Vernon Car Co., Mt. Vernon, Ill. It is understood that about 2000 more cars will be ordered.

The Florida East Coast Railway is reported to have ordered 150 hopper cars and 50 flat cars from the Pressed Steel Car Co., Pittsburg, and 16 passenger cars from the Pullman Company, Chicago.

A market report says that the Baltimore & Ohio Railroad is getting prices on about 6000 cars.

The Pennsylvania Railroad is reported to have ordered 5000 tons of structural steel from the Fort Pitt Bridge Co.

The Southern Railway, according to a market report, has ordered 2100 tons of rails from the Tennessee Coal, Iron & Railroad Co.

The Baltimore & Ohio is reported to have ordered 800 tons of steel from the Mt. Vernon Bridge Co.

The Buffalo Creek & Gauley Railroad has ordered a consolidation locomotive from the Baldwin Works, Philadelphia.

W. M. Blount, president of the Birmingham & Southeastern Railroad, Union Springs, Ala., is quoted saying that he has ordered a gasoline motor car seating 35 persons.

The Fidelity Securities Corporation, Nashville, Tenn., is reported getting prices for car bodies for the line between Nashville and Gallatin, now building.

United Railways of Baltimore.

The United Railways & Electric Co. of Baltimore reports for the fiscal year ended June 30, 1911, gross earnings of \$7,851,290, increase \$394,506; net operating revenues \$4,196,226, increase \$161,245; gross income \$4,211,537, increase \$167,820; net income after payment of taxes, etc. (amounting to \$731,957), interest on funded debt, etc., \$1,358,502. Dividends were paid on the preferred stock and interest on the income bonds, extraordinary

expenses of more than \$864,000 were met, and money set aside for sinking fund, after which there was a surplus for the year of \$154,554, making total surplus \$806,885; final surplus after payment of easement tax, etc., \$773,490.

Railroad Notes.

The Twin Mountain & Potomac Railroad Co. is reported pushing construction on its line from Keyser, W. Va., to a point beyond Knobley Mountain. It is proposed to finish the road in time to handle the fruit crop next year from the many orchards along the route.

The Baltimore & Ohio Railroad is proceeding rapidly with the construction of its new yard tracks on the south side of the Patapsco River near Baltimore. Eight additional tracks are being laid in the repair yard and two storage tracks. The capacity of the yard will be increased to 2500 cars.

The Piedmont Railway & Electric Co. is reported to have completed and opened for business its line connecting Burlington, Graham and Haw River, N. C., by a road eight and a half miles long. It is said there are 16 cotton mills on the route. George W. Hatch of Burlington is superintendent.

Concerning the report that the Texas & Pacific Railway proposed to make considerable improvements to tracks, etc., C. H. Chamberlin, chief engineer, says that the company is now receiving 6000 tons of 75-pound steel rails (A. S. C. E. section) from the Tennessee Coal, Iron & Railroad Co., Birmingham.

J. C. Vaughn, Thomasville, Ga., who has the grading contract for the work of the Atlantic Coast Line there, says the entire construction consists of a machine shop, an eight-stall roundhouse, a storehouse, offices, an 80-foot turntable, a 100-foot ash pit, several drop pits and three miles of tracks. The total cost will be \$60,000 or \$70,000. Work began September 25.

W. A. Carson, general manager of the Evansville Railways Co., Evansville, Ind., confirms the report that the Illinois Central tracks will be leased between Evansville and Henderson, Ky., about 10 miles, crossing the Ohio River. It is proposed to electrify the road and ferry the cars on a steel boat. Electric work will begin in about 60 days, and is to be completed, it is hoped, by April 1 next.

Geology for Engineers. By Lieut.-Col. R. F. Sorsbie, Royal British Engineers. Publisher, J. B. Lippincott Company, Philadelphia. Ninety-four illustrations. Price \$3.50.

That a knowledge of geology is of importance to the practical engineer is becoming appreciated, and to meet the demand for a book which will present the information in a form suitable for engineers the present treatise was compiled. The practical uses of an understanding of geological subjects are apparent in many engineering undertakings. In water-works problems it explains the natural drainage of a district, indicates good locations for artesian wells, etc. In building operations it affords information of various rocks fit for particular uses, their durability, etc. In road-making, geology is of importance in guiding the engineer to obtain best drainage results, means to prevent slipping, what rocks are suitable and preferable, etc. In earthwork and foundations for bridges, cutting tunnels, canals, etc., it is necessary for the engineer to know the character of rocks met with, the permeability to water, the dip of strata, the direction of subsurface drainage, etc.

October 12, 1911.]

MANUFACTURERS RECORD.

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TEXTILES

The Cotton Movement.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight for the first month of the present season was 1,591,081 bales, an increase of 418,306 bales over the same period last year. The exports were 939,427 bales, an increase of 318,386 bales. The takings were, by Northern spinners, 133,254 bales, a decrease of 19,744 bales; by Southern spinners, 171,961 bales, an increase of 22,113 bales. In the 36 days of the present season the amount brought into sight was 2,090,692 bales, an increase over the same period last year of 500,240 bales. The exports were 1,183,959 bales, an increase of 342,137 bales. The takings were, by Northern spinners, 131,378 bales, a decrease of 32,008 bales; by Southern spinners, 222,508 bales, an increase of 21,326 bales.

Leases Lawrenceville Plant.

The Gate City Cotton Mills, 1209 Fourth National Bank Building, Atlanta, has leased the plant of the Lawrenceville (Ga.) Manufacturing Co., and is preparing to begin operations. The company advises the MANUFACTURERS RECORD that it is now overhauling the machinery preparatory to beginning operations November 1. Equipment of the Lawrenceville plant includes about 5000 mule spinning frames, with accessory machinery, for making a superior quality of mule-spun yarn Nos. 12 and 14. The company states that its method of management will be the same as the Gate City Cotton Mills, buying its cotton direct from the planters and selling its yarn direct to the knitters.

Textile Mills Corporation.

In connection with a recent report that New York capitalists would organize a company to take over the Textile Mills Corporation, Wesson, Miss., and install new equipment, the Lane Cotton Mills Co. of New Orleans advises the MANUFACTURERS RECORD that the report is without foundation and that the Textile Mills Corporation is already out of existence. The Wesson plant is equipped with 16,490 ring spindles, 8344 woolen spindles and accompanying machinery for the production of cotton and woolen yarns.

Install Additional Equipment.

Charles C. Groat, Williamsburg, Va., who recently purchased the Williamsburg Knitting Mills Co., as previously reported, will erect three buildings and install additional equipment. The structures to be erected will be 150x40, 50x60 and 40x70 feet, while the new installation will include 40-rib body machines, 100 sewing machines, complete dyeing and bleaching plant, etc. Mr. Groat expects to have the plant ready for operation within 60 days. It will have a daily production of about 400 dozen men's fleece-lined underwear and 200 dozen ribbed underwear.

Moriposa Cotton Mills.

The Moriposa Cotton Mills, to have its principal office near Stanley, N. C., has incorporated with an authorized capital stock of \$50,000. Its incorporators include R. H. Morrison, J. G. Morrison and Jennie Morrison, all of Stanley; Ronald and Anna Wilson of Brevard, N. C.; Mary G. Raynall of Statesville, N. C., and A. O. Morrison of Atlanta, Ga.

Virginian Silk Ribbon Corporation.

The Virginian Silk Ribbon Corporation of Richmond, Va., to be capitalized at \$250,000, is being promoted by Hugh L.

Kirby of Harper's Ferry, W. Va.; W. S. Wortham, Richmond; William M. de Parys of Hagerstown, Md., and associates, to erect and operate a plant for the manufacture of taffeta silk ribbons. These ribbons, it is said, will possess peculiar qualities of durability, non-burning, etc. Mr. Wortham advises the MANUFACTURERS RECORD that organization of the company has not been effected, but within two weeks information as to the enterprise will probably be available.

Union Manufacturing Co.

The Union Manufacturing Co. of Frederick, Md., will establish a branch hosiery mill at Thurmont, Md., and has secured a building 50x60 feet for this purpose. It will have an initial installation of 18 knitting machines for the production of hosiery. In connection with the enterprise the company advises the MANUFACTURERS RECORD that the branch plant will be equipped with machinery removed from the home plant, only a small quantity of new machinery and appliances being required.

Elizabeth Cotton Mills.

G. E. Huggins of Farish-Stafford Company, New York, purchased at receiver's sale the Elizabeth Cotton Mills of Atlanta, and is reported as to organize a company with \$300,000 to \$500,000 capital stock to improve and operate the plant. This mill is equipped with 10,000 ring spindles, 250 looms, etc., and it is stated that about 5000 additional spindles will be installed, together with more looms and other equipment for the production of cotton yarns.

Panola Cotton Mills.

The Panola Cotton Mills of Greenwood, S. C., which was incorporated last year with a capital stock of \$300,000, has voted to issue \$110,000 of preferred stock, making a total of \$410,000 preferred and common stock. This company's plant is of brick and reinforced concrete construction, equipped with about 10,000 spindles, 300 looms and accompanying machinery, electrically driven. Operations will probably begin during November.

Vivian Cotton Mill.

The Vivian Cotton Mill of Cherryville, N. C., which was recently reported as to issue \$30,000 of preferred stock, writes to the MANUFACTURERS RECORD that it will issue this stock, but will not enlarge its plant. It is at present operating 2506 ring spindles, 50 broad looms and 12 carding machines on the production of sheetings.

Emory S. Harris, secretary Bennington (Va.) Board of Trade, is reported as representing a company to establish a knitting mill in the South.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Engines and Woodworking Machinery.

Florentino C. Pogliano, San Pedrito 76-Flores, Buenos Aires, writes to the MANUFACTURERS RECORD:

"I have received many offers from American manufacturers, whom I duly answered to stating how I intended to do business in my country with American products, i. e., setting a branch office in

this city and not naming agents that in my line are of no result. I should wish to communicate with an ambitious firm that would be disposed to invade our market with the following products: Steam and oil engines, woodworking machines comprehending all those lines which might have some affinity with same, settling a branch office in this city. Properly settled on this foot, I am sure of the success, and it would be a good opportunity for any American firm desirous to conquer our market and have American products better known in our community. To establish a concern which would make of the aforesaid lines its specialty is what I should want, and I say it again, there would be nothing to fear, because amongst the 30 or 40 houses that we have here selling woodworking machines, only two we have doing good business, and these are a French firm and the German one I represent, and both with a branch office here and dedicated exclusively to woodworking machinery, engines and other tools of the line. The other firms, as they embrace a great variety of goods, do nothing or very little in my line. Convinced as I am that there would be room for a third concern, I offer this opportunity to your countrymen, whom I should be very glad to discuss with, if taken into consideration, and showing at the same time to my distrustful customers that American industry is not inferior to European."

Want Machinery Catalogues, Etc.

C. David Ricarte & Co., Pasto Narino, Colombia, South America, writes to the MANUFACTURERS RECORD:

"I feel honored in addressing you and in extending to you my warmest felicitations for publishing such an important and far-famed review, a copy of which I had sent me direct by one of my agents in New York. I have found it to contain many items of real and active interest in every line of industry concerning things which we need throughout South America. We promise ourselves to give your splendid journal a wide publicity, so that you may greatly increase your list of subscribers. We greatly desire to establish business relations with your manufacturers and exporters, and as you have close and continuous contact with them, we beg you, if possible, to aid us in this wish by recommending our firm to them and giving them our address. For example, we are greatly interested in getting catalogues, prices and particulars in regard to electric motors and dynamos, telephones, telegraphs, supplies for installing arc and incandescent lights; cinematograph, phonographs; materials for printers, paper, type and presses; equipments for making carbonated waters; cigarette machines, machinery for making candles and soaps; artificial fires, postal cards, drugs, etc. We will also accept sales agencies for houses which desire to honor us with their confidence. We shall give every catalogue and price-list sent us most careful attention, and endeavor in every way to secure orders, large or small."

For Tools and Machinery.

F. Tenhaef, 37 Rue Du Pepin, Brussels, Belgium, writes to the MANUFACTURERS RECORD:

"I take the liberty of applying to you for the names of firms in America engaged in making goods for use in the colonies, such as tools and machinery. At present I have active demand for good brick-making machines, and also for ice machines and equipments. Correspondence ought to be in English, German, Spanish or French. Catalogues for comparison would be of great utility to me if I could get them."

MINING

GRIT, GUMPTION AND GO.

What These Traits Have Enabled the Jones Coal Mining Family to Achieve.

Intimately associated with the development of coal interests of West Virginia and Pennsylvania are the extensive mining operations of the Jones interests founded by James Jones in 1878, when he formed the Osceola Coal Co. The development of the Jones interests from this beginning has steadily advanced with constant addition and development of mining properties, including the incorporation in 1903 of their most extensive operations into the Pittsburg-Buffalo Company, which in 1911 produced and sold about 5,200,000 tons of coal. That year also marked the building of the town of Marianna, Pa., with its model brick dwellings, schools, amusement hall, paved streets, public baths, etc., built for the benefit of the employees of their Rachel mine. This operation has attracted the attention of the engineering and mining world because of its magnitude and completeness. It is said to be the most complete commercial coal plant ever constructed. Public officials and technical experts are constantly visiting it for the purpose of studying this example of the latest and best features of mining practice. As much as 900 tons of coal has been hoisted out of the Rachel shaft in one hour.

The incorporation of the Pittsburg-Buffalo Company was made with the sons of James Jones, the founder of the Jones interests, as the active officers of the organization. But they insisted that their father should remain at the head of the company as chairman of the board of directors, where he still keeps in touch with the affairs of the company. The officers of this company are James H. Jones, chairman of the board of directors; John H. Jones, president; Thomas P. Jones, vice-president; David G. Jones, secretary and treasurer.

With a view to presenting a statement of the magnitude of the coal operations of this company a book of over 200 pages has been issued, in which is told the story of the rise of this one family from the small work started by the father to the vast operations of the present. This book is a "human document" full of facts of interest about the company and its operations, but likewise replete with statistics which tell the story of the rise of the coal-mining industry in the United States. It contains statistical tables of coal production in Pennsylvania and the United States; coal production by States of the United States for 1909 and 1910; also historical notes of bituminous coal from 1679, when Father Hennepin discovered a "cole mine" on the Illinois river, to the present time. Statistics referring to the production of coal by Jones interests since 1878 are also given. An interesting view of the city of Pittsburg in 1817 is shown facing another view of the city as it appears in 1911, two pictures which graphically indicate the marvelous growth due to the coal industry. A map is included showing the Pennsylvania, West Virginia, Maryland, Virginia and Ohio coal mines of the Pittsburg-Buffalo Company and the mines of which this company handles the entire output. An explanation of the good and of the detractive elements of coal is given, together with a table of chemical analyses of coals from the various mines of the company. A life sketch is given of the founder of this organization and of each of the sons, all of whom take an active, zealous and energetic part in the management of the varied interests. A

description of each of the mines and illustrations of interesting equipment, views of the mine towns, buildings, etc., are included, while the coke, brick, sewer pipe and builders' supply branches of their business are noted in their appropriate places. This book is a valuable contribution to the literature of coal mining and the coal industry. It strikingly presents the achievements which our civilization and our resources make possible to men endowed like the elder Jones with grit and gumption and "go," and who are fortunate enough to have sons who inherit these traits.

Manufactured Grindstones.

Over \$3,000,000 worth of abrasive materials were produced in the United States last year.

The total estimated value of all the abrasive materials consumed in this country last year was \$4,234,662, of which \$2,010,825 worth were of domestic production.

Abrasive materials may be divided into two classes—natural and artificial. The production of artificial abrasives has shown great increase since they were first made, less than 15 years ago, and at the present time it exceeds that of the natural abrasives. During 1910 natural abrasives valued at \$1,406,805 were produced in 21 States. Of these materials, grindstones and pulp stones led, with a production valued at \$796,294. The States which produced grindstones are Ohio, Michigan, West Virginia and Colorado—Ohio producing more than seven times as much as all the other States combined.

The production of burrstones and millstones in the United States in 1910 was valued at \$28,217. The stones came from New York, Virginia, North Carolina, Pennsylvania and Alabama.

The production of oilstones and scythe stones in 1910 amounted to \$228,694, compared with \$214,019 in 1909. Oilstones were produced in Arkansas, Indiana and Ohio, the production of Arkansas amounting to nearly 75 per cent. of the whole. Scythe stones were produced in New Hampshire, Vermont, Michigan and Ohio, New Hampshire furnishing nearly 65 per cent. of the whole.

Large Production of Lime.

One of our practically inexhaustible natural resources is lime. The available limestone rock widely distributed over the United States cannot be estimated even in millions or billions of tons.

A little more than half the lime manufactured in the United States is used as structural material—in lime mortars, Portland cement mortars, concrete, gypsum plasters and whitewash. Large quantities are also used in the manufacture of chemicals, in clarifying many products, in the milling and paper industries, in sanitation, in the smelting and tinning industries, in sugar-beet manufacture, etc.

The total production of lime in 1910, according to figures compiled by Ernest F. Burchard and just given out by the United States Geological Survey, was 3,469,416 short tons, valued at \$13,809,290, a slight decrease in both tonnage and value as compared with the figures for 1909. The average price per ton in 1910 was \$3.98.

Reorganize Coal Companies.

The Yawkey & Freeman Coal Co. of Huntington, W. Va., with an authorized capital stock of \$700,000, and the Pond Fork Coal Co. of the same city, with an authorized capital stock of \$75,000, have recently been incorporated by William H. Yawkey and Augustus L. Austin of New York, C. H. Freeman and F. C. Leftwich of Huntington, and J. M. Low of Detroit. In connection with these enterprises, Mr.

Freeman advises the MANUFACTURERS RECORD that this is only a reorganization of existing companies, and no new development is contemplated.

Southern Ochre & Umber Co.

The Southern Ochre & Umber Co. of Guntersville, Ala., is proceeding with the development of its mines, producing ochre, umber, red and brown oxides, a mineral black and a whiting. Its ochre is said to exist in several shades, including yellow, gray, etc., while its umber exists in two veins, one dark and the other in its raw state, which is said to stain equal to burnt. The company's oxides are in several shades, including brown, red, etc. E. N. Cunningham of Chattanooga has been engaged as sales manager.

Slate in the South.

Of \$6,236,759 worth of slate produced in the United States in 1910, Maryland produced \$249,005 worth and Virginia \$148,721 worth. Separate figures for Georgia and Tennessee have not been announced.

Metals in Southern States.

The mine output of silver, copper, lead and zinc in 1910 had a value of \$112,896 in Arkansas, \$4301 in Kentucky, \$28,086-\$87 in Missouri and \$944,696 in Oklahoma. Missouri produced 161,016 short tons of lead and 128,589 short tons of zinc.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Will Develop 150,000 Acres.

The Johnson-Fitzgerald-Sweeny Lumber Manufacturing & Railway Co. of Jackson, Miss., has applied for charter with an authorized capital stock of \$5,000,000 to develop timber lands in Mississippi. Promoters of the company include Joel F. Johnson of Jackson, Andrew M. Sweeny and P. H. Fitzgerald of Indianapolis, who are said to control 150,000 acres of pine and hardwood timber lands. It is proposed to build sawmills of large capacity and construct and equip such lines of railway as may be necessary for the development of the property. The lands to be developed are located in the Pearl River Valley.

A 14,000-Acre Deal.

Reports from Pensacola state that J. R. Moody and C. C. Johnson of Vernon, Fla., have purchased 14,000 acres of pine timber land in Washington county, Florida, for \$80,000. The land is said to be accessible to water transportation, and it is stated that the purchasers will develop it for turpentine and naval stores.

Lumber Notes.

The Loomis Utilization Co. of Waycross, Ga., is reported as contemplating the establishment of a large plant at Savannah for the manufacture of wood pulp for paper.

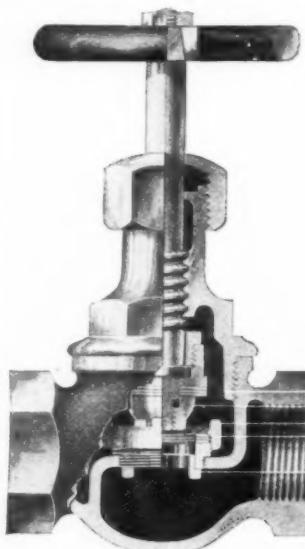
The Cremer Lumber Co. of Little Rock, Ark., has incorporated with a capital stock of \$200,000. Among the incorporators are J. C. Cremer, C. G. Howell, W. W. Atkinson, A. J. Reap and R. S. Wilson.

The Board of Trade of Greenville, S. C., is circulating an attractive leaflet prepared by Secretary E. B. Adams, containing statistics of material developments during the past 12 months and recording the fact that the board was active in securing in that time for Greenville industrial and other investments amounting to \$2,535,000.

MECHANICAL

O'Malley-Beare Multiplate Valves.

The new multiple valve recently introduced by the O'Malley-Beare Valve Co., 23 S. Jefferson street, Chicago, is shown in the accompanying illustration. This valve contains several features of advanced design and construction, the principal of which are the use of thin, durable metal plates on head and seat, and the



O'MALLEY-BEARE MULTIPLATE VALVE.

formation of a compact magazine of repair parts within each valve. The valve-seat is either flat or beveled, as desired, and the thin plates are easily replaced when necessary, obviating the usual necessity of expensive grinding of valve and valve-seat. These rings may be seen in the lines of demarcation on the valve illustration.

This company's Duplex Blow-out Valve is so constructed that all interior parts may be removed while under full boiler pressure. These multiple valves have been introduced for commercial use, we are informed, only after a year of testing and experimenting at Purdue University, followed by several years of practical demonstration in ice and electric plants, in railroad service, etc. It is patented in the United States and foreign countries, and the company is prepared to place it extensively on the market.

Holden's Two-in-One Stop Waste Hydrant.

A water supply hydrant has been invented and patented by Edward G. Holden, Dallas, Tex., the object of which is to prevent waste in the water supply and to prevent freezing of water in the hydrant. The Holden two-in-one hydrant and valve are so constructed that the hydrant itself is used as the key to cut the water off. This prevents the usual trouble in digging out the place to turn the water off, and eliminates the necessity of always having a key at hand. This hydrant, acting as a key, is always in its place, thus obviating troubles which arise from misplaced or lost keys. In operating, it is only necessary to take hold of the hydrant bibb and turn it until the water quits flowing; leave the bibb open and it drains itself at once, preventing any waste of water and eliminating any danger of a frozen hydrant. When the water supply is needed again it is only necessary to turn the hydrant back and the water will flow freely.

This hydrant is very simple in construction, and the cost is little more than the old style hydrant. It is made in two types. One type is designed to cut off all other hydrants behind it, while the other

is made to cut off only the pipe in which it is located. This prevents interference where it is desired to use two or more hydrants on the same system. It may be desirable at times to turn off and drain the whole system by one operation, in which case the first-named type can be installed. Holden & Adams, care of R. E. Adams Realty Co., Dallas, Tex., are the proprietors of this patent. Any information desired by prospective purchasers will be furnished on application, including drawings and detailed description of the valve and hydrant.

A New Inter-Phone Set for Selective Ringing.

The Western Electric Co., 463 West Street, New York, has developed a new line of inter-phones for use in residences, factories, schools and mercantile establishments where intercommunication between stations is not so frequent as to require separate lines.

These sets are arranged for selective ringing, so that any station may call any other station without interfering with the remaining ones. It is claimed that it will give just as satisfactory a service as the individual line type gives on large 24-line systems, where often two or more conversations are necessary at the same time. They are made in capacities of four and eight buttons, which will accommodate five and eight parties, respectively.

The illustration shows the eight-button set, known as No. 1327-L. This is a non-flush wall set, but a desk type is also furnished when desired. The standard finish for the 1327-L type sets is oak, but other wood finishes can be supplied. The instrument, though compact, is not crowded, and the apparatus is arranged so as to make installation easy, as only one set of bat-



WESTERN ELECTRIC INTERPHONE.

series is required for the whole system. The instruments are simple in construction, and it is claimed that there is little chance of their getting out of order. This system is recommended where a simple yet reliable means of communication is required at a low cost.

The Hayward Drag Scraper Bucket.

The Hayward Company, 50 Church street, New York, has recently placed on the market a perfected drag scraper bucket which is described as being the nearest approach to human reasoning possible to imagine in cold hard iron and steel. Its work under varying conditions and difficult requirements is herewith described and illustrated.

Contractors everywhere have been long seeking a drag scraper that would work economically and successfully under all conditions and not break or wear out quickly. The immense excavating undertakings of recent years have developed many types of digging machinery. Of

these, unquestionably the "drag scraper" is one of the best for much of the work.

The immense excavating problems of the new aqueduct which the city of New York is constructing is an illustration of the necessity of rapid, economical machinery for such work. The construction of the Panama Canal, the building of huge structures which require immense amounts of foundation excavating are further illustrations of the imperative need of the most advanced mechanical science in the construction of power digging and scraping machines.

Several radical departures from the old-style form of scraper bucket have been made, as noted in Fig. 1. In the first place, there is not a single rigid bale or bridle connected with this bucket. The chain used is made of stud links, which prevents the chain from fouling, no matter how the bucket should fall. Moreover, this form of chain is much stronger, as exemplified in the anchor chains of sea-

tached direct to it. In this case, as shown, the pulling lugs can be replaced without loss of time. All that is necessary to be

when within the boom's radius. Figs. 2, 3 and 4 show this, and also show how it is impossible, because of this vertical posi-

tion (Fig. 2) shows this bucket after it has struck the soil and is being pulled full. In this case the material is loose earth and the bridles are gauged to make the scraper sink deep and fill the bucket quickly.

Another point about this vertical hang of the bucket that contractors will appreciate is the fact that the bucket, because of it, can be picked up quickly when filled and does not have to be dragged most of the way "home." This permits of less strain on the lifting and pulling force, and consequently less cost in power and maintenance.

Another valuable feature is that the only things which project beyond the cutting edge of this new scraper are the pulling lugs and the teeth. There is no cross bracing to strengthen the sides, which would tend to prevent the bucket from entering the soil or rock properly. The peculiar pear-shaped construction of the sides or bowl of the Hayward scraper bucket give it all the strength needed. This shape, like the lines of a boat, is the result of most careful and scientific calculation, insuring the utmost of resistance to pressure and the least possible resistance to the entering of the material to be dug. In "hang," in mechanical alignment and in economy of operation in consequence, this new product of the Hayward Company seems to answer all modern requirements.

Perhaps no greater test of a power scraper can be made than to put it to work on "rotten rock." This machine is shown

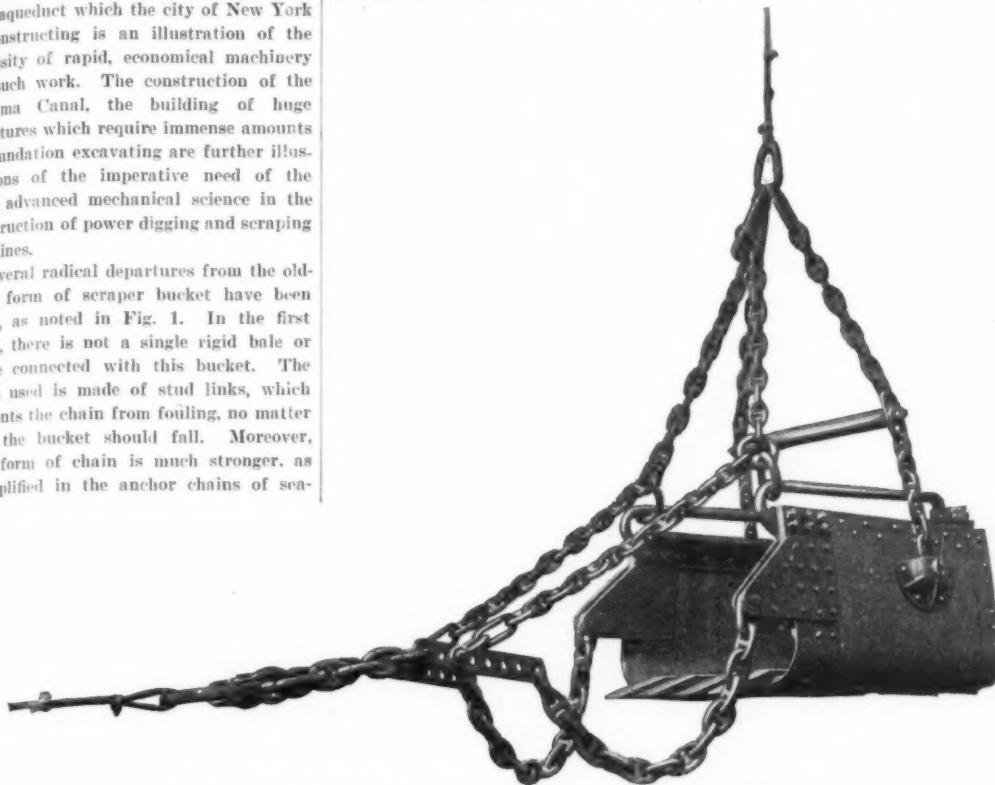
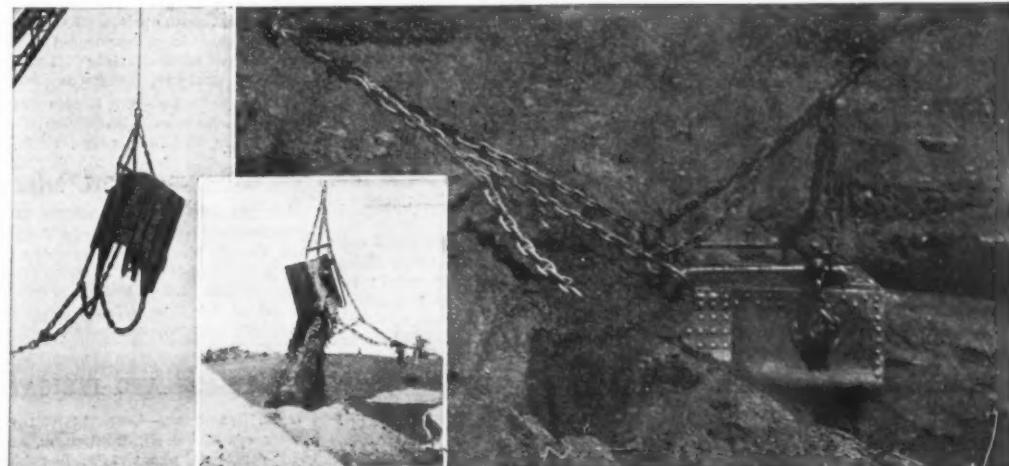


FIG. 1.—THE HAYWARD COMPANY'S IMPROVED DRAG SCRAPER BUCKET.

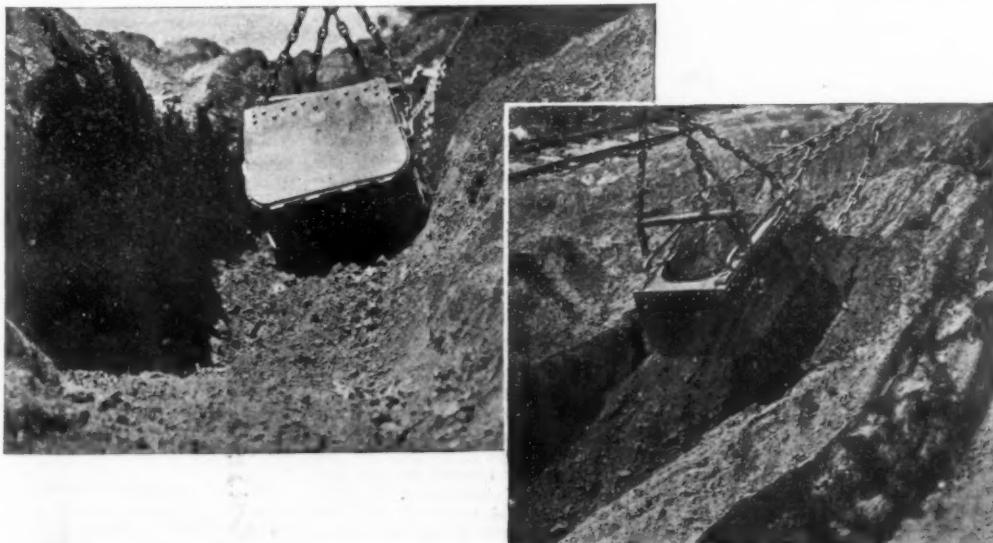
going vessels, with but a slight unimportant increase in weight.

In former types of scraper buckets the pulling lugs were permanently attached to the cutting edge or to an overhung nose. In the one illustrated the pulling lugs are so arranged that they can be removed and new ones attached without loss of time at slight expense. This is one important feature of this new scraper bucket.

But the chief feature of interest where this machine differs from other types in this placing of the pulling lugs is that the machine can be made to dig deep or at any angle desired by the simple changing of the hang of the hauling and dumping bridle attached to these lugs. With the Hayward bucket, two men and three minutes of time are sufficient to change the angle of the pulling force. This is so simple and such an easy solution of this problem that every



FIGS. 2, 3 AND 4.—HAYWARD IMPROVED DRAG BUCKET IN OPERATION.



FIGS. 5 AND 6.—HAYWARD DRAG SCRAPER EXCAVATING "ROTTEN ROCK."

contractor will wonder why no manufacturer ever thought of it before.

In the old form of scraper, when the pin wore an oval hole, it was necessary to replace the entire cutting front of the machine, as the pulling lugs were at-

independent of breakage is to provide an extra set of two of these lugs.

This new scraper bites hard at once, for it always strikes the ground at an absolutely vertical position when swung out beyond the boom and almost vertical

injection, for any of the soil or rock to remain in the bucket on dumping. This insures quick clearance at the spoil bank and adds many per cent. to the efficiency of the machine, enabling it to do much faster work with the same power. The larger illus-

at work on this material in Figs. 5 and 6 taking up rock easily. Fig. 5 shows a bucket of this type entering the rock at an extremely sharp angle, filling quickly. It is here arranged for side cutting. This material was all handled without blasting, in itself a great saving. Its power is illustrated by its load and the large rocks shown in the wake of the bucket. Fig. 6 shows the bucket filled and about to be lifted. The amount of material in this bucket is one and a half cubic yards.

This machine has a wide cutting edge made of manganese steel, its shape clearing a path for the sides of the bucket, thus reducing friction and lessening power and consequent expense. There is a cast steel inside brace which makes the bowl absolutely rigid and yet does not interfere with the bucket entering the material. It can be operated by locomotive cranes, skid excavators or other types of machines. It is claimed that it will dig perfectly at any angle. This novel machine is well worthy of careful test and investigation by those seeking a perfect digging apparatus. The scraper buckets are made in sizes from three-fourths of a cubic yard to two and one-half cubic yards capacity.

Any further information desired will be furnished on request to The Hayward Company.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "It is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ark., Pine Bluff.—Jefferson County Bridge Commission will have plans prepared by Hendrick & Cochran, consulting engineers, Kansas City, Mo., for bridge across Arkansas River. (Recently mentioned.)

Ark., Pine Bluff.—Jefferson County Bridge Commission will have plans prepared by Hendrick & Cochran, Kansas City, Mo., for free bridge to be built across Arkansas River at or near Pine Bluff. (Recently mentioned.)

Ark., Little Rock.—City awarded contract to M. D. L. Cook of Little Rock to construct concrete bridge across Swaggy Branch in connection with improvement of 24th St.

Fla., Tampa.—Board of Public Works invites bids for completing east side of bridge over Spanis Creek at Boulevard; Frederick T. Warren, City Engineer.

Ga., Greensboro.—Greene county contemplates voting on \$75,000 bond issue for construction of steel bridges over Oconee River and smaller streams and for road improvements. Address County Commissioners.

La., Bermuda.—Natchitoches county awarded contract to Austin Bros., Dallas, Tex., at \$800 to construct bridge across Cane River.

La., Winnfield.—Winn Parish Police Jury awarded contract for construction of \$2500 steel bridge across Bayou Dugdemonia between Packton and Colgrave.

Md., Baltimore.—City contemplates construction of steel bridge to replace present structure at Monroe St. over Baltimore &

Ohio Railroad tracks; bridge will be of steel and cost about \$50,000; date of opening bids not set; H. K. McCay, City Engineer.

Md., Baltimore.—Pennsylvania Railroad, Alex. C. Shand, chief engineer, Philadelphia, Pa., will probably construct steel bridge on Lizerne St. between Ashland Ave. and Chase St.; reported cost \$70,000.

N. C., Dalton.—Stokes county awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., at \$1470 to erect steel trestles and repair bridge across Little Yadkin River.

N. C., Salisbury.—Rowan and Davi counties will build bridge across Yadkin River at South River; cost \$6000. Address Rowan County Commissioners, Salisbury.

Okl., Duncan.—Stephens county will vote October 31 on \$60,000 bond issue to construct bridges on county road. Address County Commissioners. (Recently noted.)

Okl., Marietta.—Love county, John J. Pittman, County Clerk, contemplates issuing \$26,000 of bridge bonds. (Recently noted.)

Okl., Newkirk.—Kay county awarded contract to Canton Bridge Co., Canton, O., at \$9950 to construct steel bridge over Chickasha River.

Tenn., Memphis.—Shelby county will construct bridge on Kimball Ave. in Eighteenth District; also two bridges on Millington and Rosemark roads; bids invited. Address County Commissioners.

Tenn., Morristown.—City will construct concrete bridge over Turkey Creek on Main St. Address The Mayor.

Tex., Columbia.—Brazoria county will erect bridge over Brazos River recently noted; bids received until noon November 1 (extended date) at office of J. W. Munson, County Judge, Angleton, Tex.; F. S. Rice, engineer, Sweeney, Tex. (See Tex., Brazoria, and "Machinery Wanted.")

Tex., Fort Worth.—Tarrant County Commissioners ordered preliminary surveys for proposed bridges; estimates to be submitted on two widths of structures—on one bridge, to be built on N. Commerce St., will be based on width of 80 and 100 feet, and on other bridges on width of 40 and 60 feet; steel and concrete construction.

Tex., Brazoria.—Brazoria county will erect two bridges across Brazos River at Columbia and at Brazoria, recently noted; bids received until noon November 1 (extended date) at office of J. W. Munson, County Judge, Angleton, Tex.; duplicate plans and specifications obtainable on application to F. S. Rice, engineer, Sweeney, Tex. (See "Machinery Wanted.")

Va., Wise.—Wise county will construct six bridges, to have 87, 70, 54, 50, 40 and 30-foot spans; bids received until October 31; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

CLAYWORKING PLANTS

Ala., Piedmont—Bricks.—J. R. Pittman, Atlanta, Ga., purchased 300 acres and will, it is reported, establish shale-brick plant; T. C. Cowan will make survey of property.

COAL MINES AND COKE OVENS

Ala., Montgomery.—Lertz-Johnston-Gallard Coal Co. incorporated with \$20,000 capital stock by Hattie H. Lertz, A. J. Ahlum, W. Frank Johnston and others.

Ky., Williamsburg.—New Jellico Coal Co. incorporated with \$25,000 capital stock by E. F. Arthur, A. A. Arthur, E. S. Moss and C. A. Moss.

Va., Grundy.—J. H. Stinson and associates contemplate prospecting for coal. (See "Machinery Wanted.")

W. Va., Blackberry Creek (not a postoffice)—Bowman Realty Co., Huntington, W. Va., further advising as to the sale of 40,000 acres of coal lands on Blackberry Creek by Kountze Bros., 120 Broadway, New York, writes to Manufacturers Record as follows:

"The actual title to the holdings of Kountze Bros. passed to Wheaton & Smith, who are large stockholders in the United States Coal & Oil Co. While technically speaking the title is not yet in that corporation, those interested in closing the deal and familiar with the scope of the transaction are absolutely certain in their own minds that Wheaton & Smith represent the United States Coal & Oil Co." (Recently mentioned.)

W. Va., Beckley.—James D. Lowery, Catlettsburg, Ky., purchased 2000 acres coal land for about \$60,000.

W. Va., Huntington.—Pond Fork Coal Co. incorporated with \$75,000 capital stock by C. L. Freeman and F. C. Leftwich, Huntington, and William H. Yawkey, New York, and others. Mr. Freeman wires to Manufacturers Record: "No development contemplated; only reorganization of existing company."

W. Va., Huntington.—Yawkey-Freeman Coal Co. incorporated with \$700,000 capital stock by C. L. Freeman and F. C. Leftwich, Huntington, and William H. Yawkey, New York and others. Mr. Freeman wires to Manufacturers Record: "No development contemplated; only reorganization of existing company."

W. Va., Northfork.—Miami Coal & Coke Co. incorporated with \$25,000 capital stock by Walter Proctor, C. S. Diffenderfer, W. H. Sporow and others.

CONCRETE AND CEMENT PLANTS

Ga., Lafayette.—Horne Development Co. incorporated by E. M. Horne, George M. Napier, Atlanta, Ga., and others; will establish cement and lime works. (See "Mining.")

Tenn., Richard City.—Dixie Portland Cement Co., Chattanooga, Tenn., is proceeding with proposed improvements to Portland cement plant at estimated cost of \$50,000.

COTTON COMPRESSES AND GINS

Ga., Milledgeville.—Merriwether Gin Co. incorporated with \$2000 capital stock by W. T. Garrard, W. I. Harper, C. S. Winn and others.

Ga., Scottsdale.—George B. Scott will rebuild cotton gin burned at loss of about \$3000.

Miss., Mammoth Springs.—Laurel Compress & Warehouse Co. incorporated with \$30,000 capital stock by M. E. Gilbert, Laurel, Miss., and F. L. Mathews, Hattiesburg, Miss.

Tex., San Benito.—San Benito Cotton Gin Co. incorporated with \$20,000 capital stock by H. A. Paine, E. N. Green and W. T. Estes.

COTTONSEED-OIL MILLS

Ala., Faunsdale.—Faunsdale Oil Mill is reorganized of Piedmont Oil & Refining Co.; has elected W. C. Clark president, H. W. Cranford vice-president, both of Jasper, Ala.; Milton McKee secretary-treasurer; J. H. Minge of Birmingham, Ala., manager. (Recently reported incorporated with \$50,000 capital stock.)

DRAINAGE AND IRRIGATION

Ark., Texarkana.—Levee District No. 2 of Miller county, H. N. Williamson, secretary, will construct about 2,000,000 cubic yards levees, together with certain drainage ditches; levee will begin at Index, Ark., and will protect from overflow about 150,000 acres; \$300,000 bond issue voted; bids received until November 11; Morgan Engineering Co., engineer, Goodwyn Institute, Memphis, Tenn. (See "Machinery Wanted.")

La., Crowley.—Commissioners Sixth Ward and Crowley Drainage District, H. E. Lewis, president, will construct about 40 miles of drainage ditches ranging from 2 to 6 miles in length, 16 to 40 feet in width and 2 to 5 feet in depth; about 600,000 cubic yards excavation and 90 acres of clearing; bids received until October 28; W. S. White, engineer. (See "Machinery Wanted.")

La., Calcasieu Parish.—Teutonic Land & Development Co. (T. F. Denman, 220 Alexander Bldg., Beaumont, and others) plans to establish drainage districts in Calcasieu parish; owns 17,000 acres of land and has option on 9000 acres. (See "Land Developments.")

Okla., Garrett.—Bell & White, Lamar, O., will, it is reported, prepare plans for irrigation system for Cimarron county; estimated cost, \$1,000,000. (H. E. Garrett of Garrett, A. C. Munson of Denver, Col., and others were recently reported to have filed with State Board of Agriculture, Ben Hennessey, secretary and engineer, Oklahoma City, Okla., plans for irrigating 120,000 acres of land in Cimarron county by taking 1220 cubic yards water daily from Cimarron River.)

Tenn., Arno.—Pecos Valley Water & Irrigation Co. incorporated with \$50,000 capital stock by R. G. Werner, R. S. Johnson and F. E. Knapa.

Tex., Smithville.—Yerger Hill awarded contract to Taylor, Robert & Co., Houston, Tex., to drill artesian well at Shipps Lake for irrigation purposes.

Tex., Uvalde.—J. G. Smythe will irrigate 400 acres of land; is installing pumping plant.

Va., Wallacetown.—Wallacetown Drainage District is having surveys made by Government engineers preparatory to constructing drainage system for reclaiming swamp land in Southern part of Norfolk county on edge of Dismal Swamp; proposed to dredge Northwest River from Bunchwalnut's Rd. west to near Lake Drummond Canal and construct lateral canals along route leading into river; 20,000 acres to be drained; N. D. Wade, engineer in charge.

ELECTRIC PLANTS

Ala., Decatur.—City is considering \$50,000 bond issue for construction of electric-light plant. Address The Mayor.

Fla., Brooksville.—City will vote on proposal to grant franchise to Mr. Fuller, Umatilla, Fla., to construct electric-light plant and water-works; Mr. Fuller agrees to install 2300-volt dynamo.

La., Homer.—Town purchased power-house and electric plant from E. G. Sawyers; purchase price about \$5700. Address Town Clerk. (Previously mentioned.)

Md., Baltimore.—Subway Commission, Raleigh C. Thomas, electrical engineer, petitioned Board of Estimates to approve plans for additional \$1,000,000 loan to continue construction of subway. Mr. Thomas states that Electrical Commission, of which he is chief engineer, expects to continue laying of underground conduit system during coming year by extending trunk, lateral and distributing lines in practically all sections of city; date of opening proposals for Materials not fixed, but probably about February 1.

Md., Middletown.—Frederick Gas & Electric Co., Frederick, Md., submitted proposition to Town Council to extend electric system from Braddock Heights to Middletown.

N. C., Marshall.—Madison Light & Power Co. incorporated with \$10,000 capital stock by J. H. White, F. Shelton and others.

N. C., Shelby.—City will vote December 5 on \$15,000 bond issue to purchase electric-light plant. Address The Mayor. (Recently mentioned.)

N. C., Selma.—Town will expend \$20,000 for improvements to electric-light and water-works systems. Address Town Clerk.

Okl., Afton.—City will vote October 17 on \$20,000 bond issue for construction of electric-light and water-works systems. Address The Mayor.

Okla., Fairland.—L. D. Long will erect electric-light plant; machinery ordered.

Okla., Grove.—City awarded contract to F. R. Stone, Lima, O., to construct electric-light plant and water-works, including brick power-house and pumping station combined; cost \$35,000; plans by Western Engineering Co., Oklahoma City, Okla. (Recently noted.)

Okla., Muskogee.—Peabody Electric Co. incorporated with \$4550 capital stock by F. H. Nebon, A. D. Peabody and others.

Okla., Muldrow.—City will receive bids until October 10 for construction of combined electric-light plant and water-works; estimated cost, \$33,000; plans by Western Engineering Co., 703 National Bank Bldg., Oklahoma City, Okla.; E. A. Miller, clerk. (See "Machinery Wanted.")

Okla., Ponca.—City will vote October 31 on \$30,000 bond issue to construct electric-light plant. Address The Mayor.

Okla., Ponca.—City will vote October 28 on issuance of \$30,000 electric-light bonds. Address The Mayor.

Tenn., Waverly.—City voted to issue bonds for purchase of electric-light plant and water-works from Lucas Land & Lumber Co. Address The Mayor.

Tex., El Paso.—El Paso Gas & Electric Co. increased capital stock from \$455,000 to \$505,000.

Tex., Fort Stockton.—Fort Stockton Light & Ice Co., Charles A. Schraff, president (recently reported incorporated), will operate plant of 50-kilowatt capacity. (See "Ice and Cold-Storage Plants.")

Tex., Guffey.—Beaumont Ice, Light & Refrigerating Co. will extend electric transmission system to oil field adjacent to Guffey, install motors at different wells and use electric power for pumping; construction begun.

Tex., Waco.—City will, it is reported, install electric-light plant; issued \$350,000 of bonds. Address City Commissioners.

October 12, 1911.]

MANUFACTURERS RECORD.

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Va., Clifton Forge.—Clifton Forge Ice and Bottling Works, W. G. Mathews, president, awarded contracts for additional machinery, including 750-kilowatt generator set, condenser and water-tube boiler.

W. Va., Point Pleasant.—Samuel Sutton has been engaged to supervise erection of two additions to electric-light plant; one addition will be equipped with duplicate electrical machinery for operating elevators, all kinds of machinery, etc., and other as ice and cold-storage plant; Bert L. Baldwin Company, Cincinnati, O., will be in charge of installing machinery.

FERTILIZER FACTORIES

Ga., Wadley.—Home Guano Co. awarded contract to C. T. Gifford, Columbus, Ga., to construct \$10,000 fertilizer plant.

Md., Frederick.—Frederick City Abattoir Co. will erect building 50x60 feet, two stories, for fertilizer department; additional machinery will be installed, including several tanks.

S. C., Aiken.—Farmers' Storage & Fertilizer Co. will erect plant previously noted; ordinary mill construction; 75x150 feet; cost \$6000; plans by J. H. Hines; building proposals opened October 10; machinery (purchased) operated by electric power; daily capacity 150 tons fertilizer; G. E. Owens, president and manager; Daniel Crosland, vice-president; Henry Busch, secretary and treasurer. (See "Machinery Wanted.")

FLOUR, FEED AND MEAL MILLS

Ala., Eufaula.—M. M. Reeves will erect feed-mixing plant and store building. (See "Stores.")

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Pipe Works.—L. R. Lemire, president United States Cast Iron Pipe & Foundry Co., 7 Broadway, New York, advises Manufacturers Record that plans for improvement of Birmingham works have not been completed. (Previously noted to have purchased Dillmick Pipe Co.'s plant.)

Ark., Argenta.—Boilers.—J. J. Kasceln reported interested in establishment of boiler factory.

Fla., Tampa.—Tampa Foundry and Machine Works, Ernest Kreher, president, has plans and specifications for proposed enlargement of foundry; annex to be built on north end of present structure will be 52x40 feet, two stories, steel; addition on sound end to be 68x74 feet, steel; cost about \$10,000; will also erect hoisting derrick to be 85 feet high and have lifting capacity of 60 tons; Edwards Construction Co. of Tampa has constructed foundation, which is of concrete, steel interlocking; cost \$8000.

Md., Baltimore.—Cigar Machinery.—Cigar Machine Corporation, 400 Continental Bldg., incorporated with authorized capital stock of \$5,000,000 by Richard A. Bright, Richard H. Hogan and Edward H. Hugheft; will build factory and manufacture cigar-making machines. Lee S. Meyer, 25 Central Savings Bank Bldg., Baltimore, is attorney.

Mo., St. Louis.—Liberty Foundry Co. will erect foundry building; one story; cost \$3500.

Mo., St. Louis.—Machinery.—Alvey Bros. Machinery Co. incorporated with \$12,000 capital stock by John A. Alvey, Philip C. Alvey, William F. Alvey and Hugh H. Alvey.

Mo., St. Louis.—Engines.—Busch-Sulzer Bros.-Diesel Engine Co. will establish engine works in St. Louis; August A. Busch is first vice-president. (Previously mentioned.)

S. C., Greenville.—Iron and Brass.—Palmetto Iron Works will be incorporated with \$35,000 capital stock by J. S. Conrad and associates to manufacture castings in iron and brass; succeeds Palmetto Automobile and Iron Works; will erect and equip buildings; William G. Sirrine is preparing details of organization.

S. C., Spartanburg.—Iron.—Standard Iron Works incorporated with \$20,000 capital stock by W. B. Cook and others.

Tenn., Knoxville.—Plows, etc.—Wm. J. Oliver Manufacturing Co., Dale Ave. (recently noted to enlarge plant), will erect fireproof building; plans indefinite; manufactures plows and malleable castings.

GAS AND OIL DEVELOPMENTS

Ky., Torchlight.—Reuben Fork Oil Co. incorporated with \$6000 capital stock by C. V. Bartels, J. W. Perry, Webb Holt and Howard Hayes.

Ky., Torchlight.—Cochran Oil Co. incorporated with \$6000 capital stock by C. V. Bartels, B. J. Caldwell, Howard Hayes and Webb Holt.

La., Winnfield.—Adolphe Rosedale, Alexandria, La., secured options on about 20,000

acres of land in Winn parish and will drill for oil and gas.

Mo., Nevada.—Gunn Pipe Line Co., Kansas City, Mo., will install gas-supply equipment; authorized to use \$50,000 stock.

Tex., Beaumont.—Foundation Oil Co. incorporated with \$3500 capital stock by F. E. Gant, J. C. Clemens and J. C. Appleman.

Tex., Humble.—Dig-Hard Oil Co. incorporated with \$6000 capital stock by A. Tuffy, H. G. Tuffy and R. A. Parker.

Tex., Matagorda.—Bayview Oil Co. incorporated with \$9500 capital stock by S. A. Foote and G. C. Tippins.

W. Va., Charleston.—Eastern Carbon Black Co. applied for franchise to construct system of pipes along north side of Elk River for conducting petroleum, oil and natural gas to plant at Barren Creek and to supply consumers in county and elsewhere.

ICE AND COLD-STORAGE PLANTS

Ala., Grand Bay.—Charles Gerkin, R. F. D. No. 1, Box 13, contemplates installing ice plant.

Ala., Hartford.—J. H. Mantz contemplates installing ice plant; install 10-ton absorption machine.

Ark., Arkadelphia.—Arkadelphia Ice Co., F. J. Carpenter, president, will open bids in about 30 or 40 days to erect fireproof ice plant; 20 tons capacity. (Recently noted.)

Ark., Argenta.—Crystal Ice Co., I. O. Runyan, manager, will erect additional unit of 720 solidifying cans, which will manufacture ice cakes of 300 pounds and increase ca-

Tex., Fort Stockton.—Fort Stockton Light & Ice Co., Charles A. Schraff, president (recently reported incorporated with \$35,000 capital stock), will operate five-ton ice plant and 50-kilowatt electric plant.

Tex., Mercedes.—Henry Hell will purchase corrugated-iron building and install machinery for five-ton ice plant recently noted; also operate small bottling plant in connection. (See "Machinery Wanted.")

Tex., Smithville.—Smithville Ice Factory will install 50-ton capacity ice plant.

Tex., Texarkana.—Armour & Company (main office, Chicago, Ill.) will, it is reported, erect cold-storage plant; cost \$50,000.

Va., Staunton.—Virginia Fruit Growers, Inc., M. F. Gilkeson, president, and Clarence M. Moonaw, general manager, contemplates erection of cold-storage plant; capacity, 25,000 to 50,000 barrels apples; may add ice plant. (See "Machinery Wanted.")

W. Va., Point Pleasant.—Samuel Hutton has been engaged to supervise erection of building to be equipped as ice and cold-storage plant. (See "Electric Plants.")

IRON AND STEEL PLANTS

Ala., Birmingham.—Alabama Consolidated Iron & Steel Co. is in process of organization through merging of Alabama Consolidated Coal & Iron Co. and Southern Iron & Steel Co.; will acquire properties of both companies subject to about \$2,000,000 underlying bonds on each property; new company will issue \$5,000,000 6 per cent. bonds, \$12,500,000 6 per cent. cumulative preferred stock and \$12,500,000 common stock; properties con-

tinuing. (Recently noted to Orange, Tex.)

Md., Pearre (not a postoffice).—Potomac Valley Orchard Co. incorporated with \$50,000 capital stock by J. Frank Fields, Hancock, Md.; Elmer C. Moore and Edward L. De Vere, Pittsburgh, Pa.

Miss., Soso.—Soso Land Improvement Co. organized; W. S. Crawford, president; P. Todd, vice-president; J. A. Valentine, secretary and treasurer.

Miss., Wiggins.—Truck Growers' Co. will develop 500 to 1000 acres in Harrison county; cultivate, buy, ship and sell truck crops, etc.; J. M. Price, president; R. W. Hatten, vice-president; J. E. Lord, secretary; O. E. Hairston, treasurer. (Recently noted incorporated with \$10,000 capital stock.)

Mo., Alton.—Co-operative Farm, Fruit, Dairy & Stock Co. incorporated with \$30,000 capital stock by L. A. Kimball, Merl Kimball and George F. Kimball.

Mo., Kansas City.—Avacado Land Co. incorporated with \$40,000 capital stock by Theodore Ackerman, H. F. Mastin, W. C. Shenk and others.

Mo., St. Louis.—South End Park Realty & Investment Co. incorporated with \$10,000 capital stock by Frank Sebastian, Albert J. Hummel and Catherine Sebastian.

N. C., Charlotte.—Theodore Croft, Aiken, S. C., purchased land on Little River and will cultivate apple orchard.

Okl., Oklahoma City.—Southern Land Development Co. incorporated with \$25,000 capital stock by L. A. Rowland, J. D. Talbot and James A. Veasy, all of Bartlesville, Okla.

S. C., Carlisle.—Union County Real Estate & Investment Co. incorporated with \$25,000 capital stock; W. H. Gist, president; C. A. Jeret, vice-president; Sadie Peter, secretary-treasurer.

S. C., Charleston.—James Sottile, secretary-treasurer of Isle of Palms Development Co., may be addressed relative to plans of company incorporated with \$50,000 capital stock. (Recently mentioned.)

S. C., Charleston.—Atlantic Real Estate & Investment Co. incorporated with \$18,000 capital stock by A. Marion Stone and A. J. W. Garse.

S. C., Union.—City is having plans prepared by Lewis H. Wise, landscape architect, Jersey City, N. J., for improvement to Culp Park.

Tenn., Cleveland.—Inman Street Realty Co. incorporated with \$25,000 capital stock by M. L. Beard, W. K. Shedd, P. B. Mayfield and others.

Tenn., Memphis.—Thomas and Charles Wellford, E. C. Ellett and H. A. Gaither purchased about 18½ acres for \$125,000 and will develop suburb.

Tex., Fort Stockton.—Co-operative Vineyards Co. incorporated with \$150,000 capital stock by W. S. Whaley, C. W. Middleton, G. M. Shelton and others.

Tex., San Antonio.—Knob Apple Orchard Co. incorporated with \$15,000 capital stock; C. E. Blue, president; A. L. Blue, secretary and treasurer.

Va., Norfolk.—Colonial Park Land Co. incorporated with \$25,000 capital stock; R. B. Spindle, Jr., president; A. G. Burrow, vice-president; J. T. Bellamy, secretary-treasurer.

Va., Norfolk.—Ocean Park Corporation incorporated with \$75,000 capital stock; J. W. Hough, president; R. J. Marks, vice-president; F. M. Smith, Jr., secretary-treasurer; will develop 241 acres on Chesapeake and Lynnhaven Bays as seaside resort; no building at present.

Va., Roanoke.—Knob Apple Orchard Co. incorporated with \$15,000 capital stock; T. G. Burch, president, Martinsville, Va.; C. H. Bradshaw, vice-president, Preston, Va.; E. A. Schubert, secretary and treasurer, Roanoke.

LUMBER MANUFACTURING

Ala., Birmingham.—St. Clair Land & Lumber Co. incorporated with \$5000 capital stock; H. S. Smith, president and treasurer; J. A. Reid, vice-president; M. L. Bonner, secretary.

capacity of plant from 50 to 110 tons daily; will also build additional storage vaults with capacity of 2000 tons.

Ark., Hazen.—Clover Farm Dairy will enlarge ice plant to 20-ton capacity.

Ga., Atlanta.—Howe Ice Co., J. Harry Howe, president, Nashville, Tenn., will erect ice plant in Atlanta. (See "Tenn., Nashville.")

Ky., Lexington.—Consumers' Ice & Cold Storage Co. will erect addition to ice plant, increasing capacity to 200 tons ice daily; building will be 175x83 feet; three stories; brick; freestone finish; 130-ton ice machines; cost \$65,000. (Recently mentioned.)

Ky., Newport.—Crystal Ice Co. incorporated with \$100,000 capital stock by Joseph Adams, Ben A. Adams and William Schmidt.

Okla., Tulsa.—Tulsa Corporation placed order for water-cooling tower recently noted; cost \$5000; Paul M. Gallaway, engineer.

S. C., Greenville.—Greenville Ice & Fuel Co., John B. Marshall, president, has plans by F. W. Wolf & Co. for additional ice plant; ordinary construction; 50 tons daily capacity. (Recently noted.)

Tenn., Nashville.—Howe Ice Co., J. Harry Howe, president, will increase capacity of ice plant to about 100 tons daily; will also erect ice plant in Atlanta, Ga.

Tex., Bartlett.—A. S. Hardin will build ice plant.

Tex., Corpus Christi.—Swift & Co., Chicago, Ill., will, it is reported, erect cold-storage warehouse and office to cost about \$20,000; site fronting 150 feet on railroad; brick building.

sists of about 75,000 acres of coal lands, from 75,000 to 80,000 acres iron-ore lands, together with steel plant and three furnaces at Gadsden, Ala.; two furnaces at Ironaton, Ala.; one near Birmingham, one at Chattanooga and one in Georgia.

LAND DEVELOPMENTS

Ala., Mobile.—C. E. Brown, Vincennes, Ind., and Arthur McDonald, Princeton, Ind., will cultivate 417 acres for pecan orchard.

Ark., Fort Smith.—Southern Industrial Development Co. incorporated with \$10,000 capital stock; H. A. Strong, president; M. S. Blackburn, vice-president; L. E. Blackburn, secretary and treasurer.

Ga., Atlanta.—Hollywood Cemetery Co. reorganized with \$100,000 capital stock; absorbed Rose Hill Company, capitalized at \$50,000; plans improvements to cost \$20,000, including stone and cement chapel, waiting room, receiving vaults and archway; S. Foster is president.

Ga., Lafayette.—Horine Development Co. incorporated by E. M. Horine, Atlanta, Ga., and associates to develop 364 acres in Walker county; contemplates production of cement rock, establishment of cement and lime works and establishment of townsite; remaining land to be planted in fruit trees and used for agricultural purposes. (See "Mining.")

Ga., Savannah.—Southern Farm Land & Loan Co., 901 Savannah Bank & Trust Bldg., will deal in farm lands and handle turpentine and timber locations; Chas. G. Edwards, president; Wm. E. McElveen, secretary. (Recently reported organized with \$10,000 capital stock.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ala., Tuscaloosa.—Kaul Lumber Co., Birmingham, Ala., contemplates construction of sawmill and of 20 to 25 miles railroad from proposed mill site to timber; pond and yard-track excavations around mill site estimated at about 65,000 cubic yards, and railroad work about 220,000 cubic yards; company desires correspondence with contractors wishing to submit bids. (See "Machinery Wanted.")

Ala., Florence.—Richardson Lumber Co., William Richardson, manager, will erect sawmill.

Ala., Sheffield.—Tennessee River Veneer Co., E. D. McConnell, president and manager, purchased equipment for lumber and veneer mill previously noted; building erected; H. S. Holden is vice-president and K. G. McConnell, secretary-treasurer; plant to be in operation about October 15; \$30,000 capital stock; manufacture gum, oak and poplar veneers.

Ark., Blytheville.—Chicago Mill & Lumber Co. increased capital stock of company in Arkansas from \$10,000 to \$1,500,000; A. C. Lane is State agent of company.

Ark., Little Rock.—Cremer Lumber Co. incorporated with \$300,000 capital stock by J. C. Cremer, C. G. Powell, W. W. Atkinson and others.

Fla., Finney.—Gress Manufacturing Co., Jacksonville, Fla., purchased standing timber near Finney and proposes to install several small circular sawmills.

Fla., Washington County.—C. C. Johnson and J. R. Moody, Vernon, Fla., purchased 14,000 acres turpentine lands.

Ga., Milledgeville.—L. N. Callaway purchased Troutman Lumber Co., and will incorporate new company.

Ky., Louisville.—Hughes-Byron Lumber Co. incorporated with \$20,000 capital stock by E. L. Hughes, O. O. Byron and others.

La., Erwinville.—J. A. Rougon will rebuild sawmill; plans not determined. (Recently noted burned.)

La., Lake Providence.—C. O. Byrd, St. Louis, Mo., and associates, are interested, it is reported, in erection of sawmill and woodworking plant.

Miss., Jackson.—Johnson-Fitzgerald-Sweeny Lumber, Manufacturing and Railway Co. incorporated with \$5,000,000 capital stock by Joel F. Johnson of Jackson, Andrew M. Sweeny and P. H. Fitzgerald of Indianapolis, Ind.; controls 150,000 acres of pine and hard-wood timber lands in Pearl River Valley and will erect sawmills for development.

Miss., Moss Point.—O'Leary Lumber Co. purchased 4,000,000 feet of standing timber in Jackson county and will develop.

Mo., Kennett.—Moark Timber Land & Lumber Co. organized with G. H. Gammill president, O. W. Clark vice-president and O. H. Hardin secretary and manager, all of Pine Bluff, Ark.; purchased 1500 acres of timber land at \$25,000 near Kennett and will develop. Mr. Hardin will be in charge of operations, with office at Campbell, Mo.

Mo., St. Louis.—North Arkansas Lumber Co. incorporated with \$100,000 capital stock by Roy E. Frye and others.

Mo., St. Louis.—Morris Lumber Co. incorporated with \$50,000 capital stock by J. O. Nessen, George J. Green, both of Chicago, Ill.; R. M. Morris, F. J. Wolf and Howard Cole, all of St. Louis.

N. C., Andrews.—Andrews Lumber Co. incorporated with \$300,000 capital stock by Elder M. Campbell and others.

N. C., Northwest (not a postoffice).—Piedmont Lumber Co., O. W. Merrick, president, Philadelphia, Pa., will establish lumber plant.

Tenn., Chattanooga.—Sand Dale Sand Co. increased capital stock from \$2000 to \$20,000.

Tenn., Lawrence County.—Iron Ore.—James B. Powell, Route 1, Nashville, Tenn., reports proposed development of iron-oxide ore deposit for manufacture of mineral paint. (See "Miscellaneous Factories.")

Tex., Sherman.—Milam County Mining Co. incorporated with \$25,000 capital stock by B. L. Herring, Charles Batsell and C. T. Freeman.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Dredging.—Bridgeport (Ala.) Manufacturing Co. awarded contract to Home Dredging Co., Mobile, to dredge basin 225x500 feet. (See "Woodworking.")

Ky., Louisville.—Wharf.—City Council appropriated \$12,598.55 for improvement of public wharf. Address The Mayor.

La., Raceland.—Canal.—Riggs Lumber Co., Patterson, La., and Kyle Lumber Co., Franklin, La. (purchasers of about 40,000,000 feet of timber from Leon Godchaux Company, Ltd.), awarded contract to N. G. Huth Dredging Co., Franklin, La., to dredge canal

treasurer and manager. (Recently reported incorporated under N. C., Maxton.)

Tenn., Chattanooga.—Central Lumber Co. incorporated with \$50,000 capital stock by D. W. Hughes, J. D. Day, Samuel R. Guyther and W. B. Garvin.

Tenn., Memphis.—Perkins Land & Lumber Co. increased capital stock from \$25,000 to \$100,000.

Tex., Dallas.—Western Lumber & Croston Co. incorporated with \$50,000 capital stock by J. J. Marshall, R. W. Yarbrough and A. L. Burke.

Tex., Falls City.—Falls City Lumber Co. incorporated with \$12,000 capital stock by J. G. Schultz, Peter Kowlik, J. W. Moczygemb and F. P. Moczygemb.

Tex., Houston.—San Benito Lumber Co. incorporated with \$10,000 capital stock by S. W. Murphy, John S. Murphy and D. A. Hagerman.

Tex., Vernon.—Herring-Bennett Lumber Co. organized with C. Herring president, L. K. Johnson vice-president, W. W. Bennett secretary, A. R. Cotton treasurer; has purchased lumber yard now in operation. (Recently noted incorporated with \$20,000 capital stock.)

Tex., El Paso.—Dr. F. S. Pearson, 25 Broad St., New York (of Pearson Syndicate), will build lumber and planing mills. (See "Woodworking Plants.")

METAL-WORKING PLANTS

Mo., Kansas City.—Razors.—Jones Razor Manufacturing Co. incorporated with \$75,000 capital stock by Floyd D. Jones, T. I. Jones and Frank G. Johnson; will establish plant.

N. C., Wilmington.—Metal Stamping.—Carolina Metal Products Co. will open bids October 16 to erect factory building recently noted; 50x200 feet; mill construction; frame, covered with metal tile; plans by L. A. Hooth, Room 2 Masonic Temple, Wilmington. (See "Machinery Wanted.")

MINING

Ala., Guntersville.—Ochre, etc.—Southern Ochre & Umber Co. is proceeding with development of mines producing ochre, umber, red and brown oxides, mineral black and whitening; market in dry pulverized or ground form; E. N. Cunningham, sales manager; address until November 1, Chattanooga, Tenn.

Ga., Abbeville.—R. W. Durden, Savannah, Ga., purchased rock lands and will develop; work begun.

Ga., Lafayette.—Horine Development Co. incorporated with \$200,000 capital stock (and privilege of increasing to \$1,000,000) by E. M. Horine, Henry L. Degive, E. Lee Worsham and George M. Napier, Atlanta, Ga.; plans address of 3643 acres in Walker county; will operate mines and establish cement and lime works; also contemplates development of townsite and agricultural and fruit lands.

Mo., Joplin.—Racine Mining Co. incorporated with \$8000 capital stock by Clyde H. Scott, H. W. Dale and Frank W. Dale.

Mo., Joplin.—The Hackett Mining Co. increased capital stock from \$50,000 to \$120,000.

Mo., Joplin.—Craver & Barnes, Bartlesville, Okla., have, it is reported, purchased lease on 40 acres of land on which are three concentrating plants; undertake development.

Okl., Troy.—United States Smelting & Refining Co. incorporated with \$300,000 capital stock by J. T. Knighten, Troy; W. R. Smith, Ravia, Okla., and T. A. Burnett, Madill, Okla.

Tenn., Chattanooga.—Sand Dale Sand Co. increased capital stock from \$2000 to \$20,000.

Tenn., Lawrence County.—Iron Ore.—James B. Powell, Route 1, Nashville, Tenn., reports proposed development of iron-oxide ore deposit for manufacture of mineral paint. (See "Miscellaneous Factories.")

Tex., Sherman.—Milam County Mining Co. incorporated with \$25,000 capital stock by B. L. Herring, Charles Batsell and C. T. Freeman.

MISCELLANEOUS CONSTRUCTION

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Ky., Louisville.—Wharf.—City Council appropriated \$12,598.55 for improvement of public wharf. Address The Mayor.

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from Bayou Lafourche, distance of four miles; width 34 feet; 7 feet of water; will be used for floating timber; dredging begun.

Miss., Greenville.—Levee.—Board of Mississippi Levee Commissioners awarded contract for 500,000 yards of levee work, as follows: Sections 1 and 2, John G. Sessions; sections 3 and 5, John Neystrom; section 4, Roach, Stanwell, Dulany & Foote, and upper work to Lowrance Bros.

Mo., Kansas City.—Subway.—Kansas City Terminal Railway Co., J. V. Hanna, chief engineer, Kansas City, awarded contract to O'Hagan & Lake, 223 Mercantile Block, Aurora, Ill., to construct subway under tracks at Independence Rd.; work includes 25,000 yards of excavation and 4000 yards of concrete, required paving, etc.

Tenn., Chattanooga.—Tunnel.—Tunnel Commission invites bids until October 14 for completion of Mission Ridge tunnel; Robert Hooke, City Engineer.

Tenn., Memphis.—Levee.—Shelby county will increase height of levee on Horn Lake Rd. by about four or five feet; structure is 1500 feet long; bids to be invited. Address County Commissioners.

Tex., Orange.—Channel.—Government will complete arrangements for proposed completion of 25-foot channel from Orange to Gulf of Mexico; \$143,000 bond issue has been sold; George W. Bancroft, secretary Orange County Navigation Board.

Va., Norfolk.—Publishing.—Poultry Times Publishing Co. incorporated with \$7500 capital stock; H. B. Vesey, president; A. E. D. Holden, secretary; C. R. Wallace, treasurer.

Va., Norfolk.—Cresositing.—Atlantic Cresositing & Wood Preserving Co. will repair cresositing plant recently reported damaged by fire at loss of about \$10,000.

Va., Richmond.—Vehicles.—Grasberger Vehicle Co. incorporated with \$50,000 capital stock; J. A. Grasberger, president; J. E. Sorg, vice-president; Robert N. Wildbore, secretary and treasurer.

MISCELLANEOUS ENTERPRISES

Ala., Mobile.—Inclinator.—City contemplates construction of garbage disposal plant; probable cost \$50,000. Address The Mayor.

Ala., Mobile.—Fire Extinguishers.—Fire Co. incorporated with \$5000 capital stock; W. H. Bryant, president; J. C. Thompson, vice-president; J. W. Gregory, secretary.

Ark., Fort Smith.—Fruit.—Caldarera Fruit Co. incorporated with \$50,000 capital stock; S. Caldarera, president; Tom Caldarera, vice-president; N. R. Pollan, secretary.

Ga., Macon.—Contracting.—Midland City Building Co. incorporated with \$5000 capital stock by A. D. Schofield, H. B. Erminger, Jr., M. H. Massee, T. H. Parker and Leon S. Dure.

Ky., Louisville.—Engraving.—Schlich-Kottke Engraving Co. incorporated with \$10,000 capital stock by Rudolph C. Schlich, Hugo C. Kottke and Joseph Steitenpohl.

Ky., Louisville.—Contracting.—Midland City Building Co. incorporated with \$10,000 capital stock by Earle Whitton, M. W. Thomas and C. F. Thomas.

Ky., Paducah.—Cigars and Tobacco.—Werthern Cigar & Tobacco Co. incorporated with \$10,000 capital stock by Charles De Werthern, Henry A. Petter and George A. Meyer.

Miss., Greenville.—Steamboat Line.—Grasty McCaffery Steamboat Co. incorporated with \$10,000 capital stock by James Milton Grasty, Mrs. Julia Grasty and Jack McCaffery to operate steamboats on Mississippi River and tributaries.

Mo., St. Louis.—Screws, etc.—Western Screw Product Co. incorporated with \$3000 capital stock by John T. Say, Edward J. Moeller, Joseph J. Hagen and William L. Igoe.

N. C., Louisburg.—Live-stock.—Hill Live Stock Co. incorporated with \$100,000 capital stock by K. P. and J. P. Hill and others.

N. C., Wilmington.—Marine Railway.—Wilmington Marine Railway Co., B. O. Stone, president, 5-7 S. Water St., awarded contract to H. S. Crandall & Son, Boston, Mass., to construct marine railway to have facilities for boats of 1500 tons. (Recently mentioned.)

Okl., Collinsville.—Publishing.—Times Publishing Co. (recently reported incorporated with \$5000 capital stock) will publish daily and weekly newspaper; Sadie Ward, president; J. D. Ward, secretary-treasurer. (Recently noted incorporated with \$10,000 capital stock.)

Fla., Miami.—Bottling Works.—Coca-Cola Bottling Co. will enlarge plant; T. G. Buckner is owner.

Fla., Tampa.—Cigars.—Tampa-Cuba Cigar Co., E. Berger, manager, Box 783, leased building and will manufacture cigars; daily capacity, 15,000. (Recently noted incorporated with \$250,000 capital stock.)

Ga., Atlanta.—Razor Sharpener.—A. E. Hill Manufacturing Co. incorporated with \$5000 by Albert E. Hill, C. M. Reynolds and C. P. Reynolds to manufacture patented safety blade sharpener.

Ga., Atlanta.—Ice-cream.—Jessup & Antrim Ice-Cream Co. will increase capital stock from \$8000 to \$10,000; A. Wesley Antrim, president; W. S. Doan, secretary.

Ga., Atlanta.—Farm Implements.—Carter Manufacturing Co. incorporated with \$10,000 capital stock by E. J. Miles of De Kalb county and M. P. Maury, Atlanta, to manufacture farm implements.

Ga., Colerain.—Turpentine, etc.—Gulf Pine Product Co., John T. O'Connor, plan receiver.

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MANUFACTURERS RECORD.

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Myers, president, Waycross, Ga. (recently noted to establish chain of turpentine plants, with first plant at Colerain), incorporated with \$160,000 capital stock.

Ga., Savannah—Paper Pulp.—Loomis Utilization Co., Waycross, Ga., reported as contemplating construction of plant to make paper pulp from waste products at cost of about \$500,000.

Ky., Louisville—Tents and Awnings.—American Tent & Awning Co. incorporated with \$300 capital stock by Charles E. McAnly, Jacob Christi and A. C. McAnly.

Ky., Louisville—Medicine.—Eu-Cu-Menth Co. incorporated with \$50,000 capital stock by J. S. Russell, Harry Hogshead and George F. Fitz to manufacture medicines.

La., De Quincy—Tar.—Texas Pine Tar Co. incorporated with \$10,000 capital stock; H. A. Stone, president; W. S. Ferguson, vice-president; Thomas Waties, secretary and treasurer.

Md., Baltimore—Monumental Brewing Co., 300 E. Lombard St., awarded contract to J. Henry Miller, 106 Dover St., to remodel brewery.

Md., Baltimore—Furnace Device.—American Furnace Device Co., 444 Equitable Bldg., will manufacture stationary and locomotive furnace device; John Bolgiano, president and manager; Samuel E. Pentz, secretary; Frank H. Shallus, treasurer. (Recently noted incorporated with \$10,000 capital stock.)

Md., Baltimore—Belting, etc.—Maryland Belting & Packing Co., 1618 Bank St. (recently reported incorporated with \$300,000 capital stock), will continue operation of established plant; manufactures special stitched canvas belting, leather belting, packing and hose.

Md., Chesapeake City—Barges.—Henry Dierber Barge Building Co., Elkton, Md., will establish barge-building plant at Chesapeake City.

Mo., Carthage—Shoes.—Knight-Redmond Shoe Co. incorporated with \$20,000 capital stock by W. D. Knight, F. Redmond and Robyn F. Redmond.

Mo., St. Louis—Novelties.—Curlew Novelty Co., 622 Maple Ave., organized with Samuel Curtis president, Edward T. Klippele vice-president and treasurer, A. B. Lewis secretary; will manufacture collapsible drinking cups; further information not available. (Recently reported incorporated with \$10,000 capital stock.)

Mo., St. Louis—Manewal Bread Co., Broadway and Lami St., will erect addition to bakery.

Mo., St. Louis—Paper.—Hayden Paper Co. increased capital stock from \$50,000 to \$100,000.

Mo., St. Louis—Automatic Registers.—Automatic Register Co. contemplates establishing plant. W. P. Launtz, East St. Louis, Ill., is interested.

Mo., St. Louis—Shirts.—Harris Shirt Co. increased capital stock from \$2000 to \$7500.

Mo., St. Louis—Brewery.—Anheuser-Busch Brewing Association will remodel bottling department; cost \$3500; plans by Widman & Walsh, Walwright Bldg., St. Louis; architects may be addressed.

N. C., Elizabeth City—Gas Plant.—J. B. Flora, Mayor, states that he will hear proposals at 7:30 P. M. November 9 from all who wish franchise to install gas plant. (See "Machinery Wanted.")

N. C., High Point—Gas.—Sydney Kenney, Morris Bldg., Philadelphia, Pa., applied for franchise for gas plant to furnish light, heat and power; is own engineer and constructor; details as to cost, construction, etc., not determined.

N. C., Selma—Gum.—Gum Manufacturing Co. will erect brick building.

N. C., Wilmington—Soap.—L. G. Hancock, 20 N. 7th St., and associates contemplate establishment of soap factory.

S. C., Greenwood—Bakery.—F. A. Finchberger will improve bakery; install two ovens; cost \$2000.

Tenn., Jackson—Iron Bolts, etc.—Galey Nut Lock Co. incorporated with \$100,000 capital stock by W. F. Lamb, W. T. Peter, J. D. Newton, C. D. Siler and C. E. Pigford.

Tenn., Lawrence County—Paint.—James B. Powell, Route 1, Nashville, Tenn., states arrangements are being made to manufacture red mineral paint from iron-oxide ore. (See "Mining.")

Tenn., Knoxville—Marble.—Asbury Marble Co. incorporated with \$25,000 capital stock by James B. Jones, J. M. Burkhardt, W. R. Monday, John H. Davis and J. R. Stone.

Tenn., Memphis—Chemicals.—Arthur C. O'Connor is promoting establishment of plant to manufacture chemicals from ashes received from sawmills of city and vicinity.

Tenn., Nashville—Southern Stamping & Manufacturing Co. increased capital stock from \$10,000 to \$25,000.

Tenn., Nashville—Gloves.—Cherokee Glove Co. incorporated with \$5000 capital stock by J. B. Harris, A. P. Foster, R. F. Moore and others.

Tex., Austin—Cotton Choppers.—Mamie B. Manufacturing Co. incorporated with \$30,000 capital stock by W. B. Alexander, T. J. Christal and Otto Ebeling.

Tex., Dallas—Bakery.—P. H. Kleber & Sons will open bids December 15 to erect bakery recently noted; 100x100 feet; mill construction; inside finish, white enameled brick; cost \$30,000; plans by Lang & Witchell, Dallas; daily capacity 20,000 loaves of bread. (See "Machinery Wanted.")

Tex., El Paso—Paper Mill.—Dr. F. S. Pearson, 25 Broad St., New York (of Pearson Syndicate), is reported to erect previously-noted paper mill in connection with proposed woodworking plant. (See "Woodworking Plants.")

Tex., Fort Worth—Monuments.—Worth Monument Co. incorporated with \$3500 capital stock by J. O. Pratt, A. Bronquist and W. A. Link.

Tex., Houston—Petroleum and Petroleum Products.—Magnolia Petroleum Co., E. R. Brown, vice-president and general manager (recently noted to build at Houston), is now placing distributing stations in larger towns of Texas; mainly galvanized iron buildings; some brick or concrete structures; home office of sales department, Room 408, Andrews Bldg., Dallas, Tex.; refineries at Beaumont and Corsicana.

Tex., Mercedes—Bottling Works.—Henry Hell will operate small bottling plant in connection with ice plant. (See "Miscellaneous Factories" and "Machinery Wanted.")

Tex., Sanderson—Wax.—Rio Grande Wax Co. incorporated with \$25,000 capital stock; Oscar Paclis, vice-president, and F. W. Reeve, secretary and treasurer, both of Sanderson, and J. G. Griner, San Antonio, Tex.; will manufacture wax from candelilla plant and erect refinery.

Va., Norfolk—Patented Device.—Phoenix Manufacturing Co. incorporated with \$5000 capital stock to manufacture patented device for preventing horses from slipping together; S. B. Carney, president; P. W. Carney, vice-president; S. B. Carney, Jr., secretary and treasurer.

Va., Portsmouth—Ice-cream.—Premier Ice-Cream Co. incorporated with \$2000 capital stock; J. B. Pendleton, president; N. G. Gale, vice-president, secretary and treasurer; H. B. Kraft, manager.

Va., Berkeley Springs—Glass.—Berkeley Glass Sand Co., II, P. Bridges, president, awarded contract to Lewistown Foundry & Machine Co., Lewistown, Pa., to erect building recently noted; mill construction; 70x20 feet; cost \$25,000; W. O. Alexander, architect and construction engineer.

Va., Parkersburg—Clothing, etc.—Glasgow Woolen Mills Co. incorporated with \$20,000 capital stock by James Rose, Agnes M. Reilly, John F. Laird, W. A. Hirsch and others.

MOTORS AND GARAGES

Ala., Birmingham—Drennen Motor Car Co. increased capital stock from \$5000 to \$50,000.

Ala., Evergreen—Evergreen Motor Car Co. incorporated with \$2000 capital stock by C. P. Deming, H. W. Dunn and R. L. Whitcomb.

D. C., Washington.—Mrs. Alice Copley Thaw awarded contract to Page Construction Co., Hibbs Bldg., Washington, to remodel stable for garage, servants' quarters and laundry; cost \$5000. (See "Dwellings.")

Ga., Macon—Howard Motor Car Co., J. E. Keith, general manager, Jackson, Mich., will establish automobile plant; initial annual capacity, 800 to 1000 finished cars; will install about \$50,000 worth of equipment. (Recently noted.)

Ky., Paducah—Kentucky Auto & Manufacturing Co. incorporated with \$5000 capital stock by F. M. Fisher, R. G. Fisher and W. F. Paxton.

Mo., St. Louis—Wrought Iron Range Co. will erect one-story private garage; fireproof; cost \$3000.

N. C., Cherryville.—Kendrick Bros. will erect brick garage; 30x30 feet; one story; construction by owners.

N. C., Fayetteville.—Consolidated Motor Co. incorporated with \$25,000 capital stock by H. Lutterloh, J. U. McKethan and Benjamin McMillan.

N. C., Shelby.—Charles L. Eskridge awarded contract to erect garage; 4000 feet floor space; plate-glass front; concrete floors; gasoline, oil and compressed-air tanks; T.

Webb of Shelby is contractor. (See "Machinery Wanted.")

Okla., Nowata—Nowata Motor Car Co. incorporated with \$2500 capital stock by Walter K. Campbell, Independence, Kans.; George Gordon and Stanley Campbell, both of Nowata.

Tex., Cleburne.—Company organized by Brown Douglas, O. L. Bishop and R. H. Crank to establish automobile factory.

Tex., El Paso—Automobiles.—Rio Grande Automobile Co., J. M. Wyatt, president, 239 Texas St. (recently noted incorporated under "Miscellaneous Enterprises" with \$5000 capital stock), will deal in automobiles.

Tex., Sherman.—Sherman Automobile & Vulcanizing Co., 207 E. Houston St., organized by F. D. Welch of Amarillo, Tex., and P. M. Shelton of Grayson county, Texas; will establish vulcanizing plant in connection with automobile establishment.

Tex., Wichita Falls—Motor Trucks.—Wichita Motor Co. organized to establish plant to manufacture auto trucks.

Va., Richmond.—Louis Bromm estate will erect garage; 60x140 feet; ordinary construction; cost \$7000. (Recently noted.)

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Thomasville.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., awarded contract to J. C. Vaughn, Thomasville, to erect machine shop, roundhouse for 8 engines, store-house, offices, 80-foot turntable, 100-foot ash pit, several drop pits, three miles of track and 20,000 yards of grading; cost \$60,000 to \$70,000. (Recently noted.)

Miss., Gulfport.—Gulfport & Mississippi Coast Traction Co., J. T. Jones, president, purchased equipment for machine shop recently noted to be erected; 40x44-foot mill-construction building; erection by company.

ROAD AND STREET WORK

Ala., Birmingham.—City will pave Eighth Ave. from W. 20th to 28th St. with bituminous macadam; Maury Nicholson, City Engineer.

Ala., Camden—Wilcox county will grade, drain and surface with gravel about three miles of State-aid road; bids received until November 7; W. S. Keller, State Highway Engineer, Montgomery, Ala. (See "Machinery Wanted.")

Ala., Gadsden.—Etowah county will construct road from Gadsden to Glencoe, about six miles; county appropriated \$2000 and State will appropriate \$2000 additional; road will be 28 feet wide and finished with 30 feet of chert on top; F. G. Lee, County Engineer, will supervise construction.

Ala., Marion.—Perry county voted \$110,000 bond issue for road construction. Address County Commissioners.

Ala., Scottsboro.—Jackson county will grade, drain and surface with macadam about two and seven-tenths miles of State-aid road; will also grade six and seven-tenths miles of county road; bids received until November 8; W. S. Keller, State Highway Engineer, Montgomery, Ala. (See "Machinery Wanted.")

Ala., Tuskegee.—Macon county will construct 10 miles of road from Tuskegee to Union Church, on Montgomery Rd.; surveys being made. Address County Commissioners.

Ark., Little Rock.—Board of Commissioners Improvement District No. 180 will have bids received until 12 M. October 24 by W. C. Foster, district secretary, 301 Main St., for grading, curbing, draining and paving with asphalt or asphaltic type of pavement about 38,500 square yards; Ford & McCrea, engineers in charge, 338 Gazette Bldg., Little Rock. (See "Machinery Wanted.")

Ark., Little Rock.—City awarded contract to M. D. L. Cook of Little Rock for improvement of W. 24th St., including concrete bridge across Swaggerty Branch. Address The Mayor.

Ark., Pine Bluff.—Paving District No. 27 of Pine Bluff (William Nichol and others) will construct about 20,000 square yards treated wood-block pavement, 10,000 linear feet combined curb and gutter, and 13,500 cubic yards excavation and one reinforced-concrete bridge; bids received until November 1; Wm. J. Parkes, engineer, 203 Citizens' Bank Bldg., Pine Bluff. (See "Machinery Wanted.")

Fla., Green Cove Springs.—Clay county will, it is reported, vote in December on bond issue for construction of road from Duval to Putnam county line. Address County Commissioners.

Fla., Jacksonville.—Duval county will clear and grade Chaseville Rd. from Atlantic Blvd.

to Chaseville; bids received until October 20; Gall L. Barnard, County Engineer. (See "Machinery Wanted.")

Fla., Pensacola.—City will construct about 180,000 square yards clay or shale block, sheet asphalt, asphalt block, bituminous, wood block or concrete paving and 116,000 linear feet concrete curb; bids received until November 7; John A. Merritt, chairman State Board of Bond Trustees; George Rommel, Jr., chief engineer. (See "Machinery Wanted.")

Ga., Bainbridge.—City will vote October 28 on \$45,000 bond issue for paving. Address The Mayor.

Ga., Greensboro.—Greene county contemplated voting on \$75,000 bond issue for road improvements and construction of steel bridges over Oconee River and smaller streams. Address County Commissioners.

Ky., Louisville.—City awarded contract to Barber Asphalt Paving Co. of Louisville at \$23,200 to pave portion of Broadway with asphalt.

Ky., Louisville.—City will reconstruct St. from Walnut to Chestnut St. and Shelby St. from Oak to Camp St.; vitrified brick; cost about \$12,000; will also soon invite bids on paving of Clay St. from Jefferson St. to Broadway with bituminous macadam to cost about \$75,000; D. R. Lyman, chief engineer Board of Public Works.

Ky., Louisville.—Board of Public Works will receive bids until 2 P. M. October 13 for reconstruction of 4th St. from Jefferson to Walnut St. with creosoted wood blocks; cost about \$14,000. G. W. Gossell is lowest bidder at about \$3850 to pave Underhill St. from Adair to Kentucky St. with vitrified brick, and L. W. Hancock Company is lowest bidder at about \$4500 to pave St. Louis Ave. from 23d St. to Cane Run Rd. with vitrified block.

Ky., Pineville.—City will vote November 7 on \$15,000 bond issue for completion of streets; F. A. Heath, City Clerk. (Recently noted.)

La., New Orleans.—City will reconstruct cut-off road from lower line of Aurora plantation in Orleans parish to point near upper line of Bellechasse plantation in Plaquemine parish; bids received until October 17; Charles R. Kennedy, City Comptroller. (See "Machinery Wanted.")

La., New Orleans.—Joseph A. Craven & Co. of New Orleans are lowest bidders at about \$324 for surfacing Howard Ave. from Claiborne to Broad St. with gravel; finance committee instructed Charles R. Kennedy, City Comptroller, to advertise for bids on paving Burgundy St. from Poland to Delery with lime rock asphalt.

Md., Baltimore.—R. Keith Compton, chairman Paving Commission, City Hall, states \$1,000,000 is available for commission in 1912; this will construct about 20 miles paving; material, Belgian block, vitrified block, sheet asphalt and bituminous macadam; will advertise for and probably open bids within two weeks for paving Bolton St. from Hoffman to Lafayette Ave.; Hoffman, Eutaw Pl. to Brevard St.; Brevard, from Cathedral to Dolphin; Preston St., from Eutaw Pl. to Cathedral St. (Recently noted.)

Md., Snow Hill.—J. Edward White, clerk Commissioner of Worcester County, Snow Hill, states building road from Berlin, Md., to Selbyville, Del., will be considered after meeting of Legislature. (Recently noted to construct road to connect with proposed DuPont road at Selbyville.)

Miss., Jackson.—City awarded contract to Southern Asphalt Paving Co., Birmingham, Ala., at about \$30,000 to pave W. Capitol St. from Lemon to Magnolia St., one mile, with asphalt. (Recently mentioned.)

Miss., Monticello.—Lawrence County Supervisors awarded contracts for road construction in Beats 1 to 5, inclusive, to R. K. Sharp, J. J. Grice, L. C. Renfree, W. L. Cliburn and W. F. Parkman.

Mo., Carthage.—F. B. Newton, City Engineer, is preparing plans for paving Carthage public square and streets adjoining, probably with asphalt concrete on square and asphalt macadam on streets.

Mo., Marceline.—City contemplates paving seven blocks of streets with vitrified brick. Address The Mayor.

Mo., Neosho.—Newton county will construct four miles of road from Diamond to county line and from that point two miles north to Sarcoxie-Joplin Rd.; work will include two bridges. Address County Commissioners.

N. C., Apex.—Town will vote in December on \$10,000 bond issue for street improvements and erection of market building. Address Town Clerk.

N. C., Troy.—Montgomery county will vote

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January 9 on \$100,000 bond issue for road construction. Address County Commissioners.

Okl., Marietta.—Love county, John J. Pittman, County Clerk, contemplates issuing \$74,000 of bonds for road improvement. (Recently noted.)

Okl., Stillwell.—City will construct two miles of sidewalks. Address The Mayor.

Okl., Tulsa.—City awarded contract to Eureka Construction Co. to pave with asphalt 18 streets, including Cheyenne, Madison, 9th, 10th, 11th and 12th Sts., etc.; to Cleveland-Trinidad Paving Co., Cleveland, O., Detroit Ave. and Duluth Pl., and to Parker-Washington Paving Co., St. Louis, Mo., two alleys with brick; E. B. Cline, City Auditor.

S. C., Aiken.—City awarded contract to W. H. Hite at \$13,500 to pave Main St.; vitrified brick; four-inch crushed rock and concrete base.

S. C., Chester.—Chester township of Chester county awarded contract to R. L. Hays to construct road; cost \$5000; sand, clay and gravel; width, 30 feet, including ditches; James Hamilton, City Engineer; construction begun. (Recently noted.)

S. C., Florence.—City awarded contract to Atlantic Bitulithic Co., Richmond, Va., at about \$50,000 for paving with bitulithic and macadam Evans and Dargan Sts.; contract calls for 20,000 square yards bitulithic and 20,000 square yards macadam paving.

S. C., Greenville.—City awarded contract to West Construction Co., Chattanooga, Tenn., to pave Augusta Ave. with asphalt from Pendleton to Elkins St.

Tenn., Covington.—Tipton county defeated \$300,000 bond issue for road construction. Address County Commissioners. (Recently mentioned.)

Tenn., Chattanooga.—Hamilton County Commissioners appropriated \$20,000 for construction and repair of roads on Lookout Mountain; will be provided for out of \$50,000 road bond funds.

Tenn., Decaturville.—Decatur county will vote November 25 on \$100,000 bond issue for construction of about 99 miles of roads. Address County Commissioners.

Tenn., Gainesboro.—Jackson county will vote on \$150,000 bond issue for road improvements. Address County Commissioners.

Tenn., Jonesboro.—Washington County Commissioners voted to issue \$60,000 of bonds for construction of Washington county link in State highway.

Tenn., Loudon.—Loudon county voted \$25,000 bond issue for road improvements. Address County Commissioners.

Tenn., Memphis.—City will construct concrete walks at Central High School, S. Bellevue Ave.; bids received until October 11; A. B. Hill, secretary Board of Education. (See "Machinery Wanted.")

Tenn., Memphis.—Speedway Land Co., J. M. Dickinson, president, 71 Madison Ave., will construct additional streets, sidewalks, drainpipes, etc., at Speedway Ter.; cost about \$40,000; work includes grading, laying concrete walks, curbs and gutters and laying cementing gravel on roadway on portions of of Stonewall St., grading Faxon Ave. and excavating canal from Louisville & Nashville Railroad to east and west canal now through property; bids received until October 14; J. Paul Gaines, 1386 Faxon Ave., is engineer. (See "Machinery Wanted.")

Tenn., Madisonville.—Monroe County Commissioners ordered \$150,000 bond issue for road construction.

Tenn., Nashville.—Board of Public Works awarded contract to Fisher Concrete Co. to construct additional granite curb and sidewalk on Third, Fourth and Seventeenth Aves.

Tenn., Paris.—Henry County Commissioners appropriated \$10,000 to supplement like amount to be donated for road improvements. Address County Commissioners.

Tenn., Selmer.—McNairy county will vote November 21 on \$100,000 bond issue for road construction. Address County Commissioners.

Tenn., Waverly.—Humphreys County Commission, James F. Fowlkes, chairman, has \$10,000 available for construction of Memphis-Bristol highway; 20 feet between sewers; 12 and 16 feet of metal; D. G. Seymour of Knoxville is making survey; contracts will be let when plans, etc., are complete. (Humphreys and Houston counties recently noted to construct road.)

Tex., Alta Loma.—Galveston county will grade and surface streets with mudshell, requiring about 1100 yards of material; bids invited. Address County Commissioners, Galveston, Tex.

Tex., Arcadia.—Galveston county will grade

and surface with mudshell Jackson St., about eight blocks; will require about 1100 yards of shell; bids invited. Address County Commissioners, Galveston, Tex.

Tex., Galveston.—Galveston, Chambers and Jefferson counties will jointly construct road to connect three counties. Address Galveston County Commissioners at Galveston.

Tex., Galveston.—Galveston County Commissioners awarded contract to Kelso & Vautrin of Galveston for 4900 square yards of vitrified brick-paving over arch portion of Galveston causeway, and to J. C. Kelso of Galveston for surfacing roadway portion with mudshell, requiring about 12,000 cubic yards of material; two contracts aggregate \$24,390; John M. Murch, County Auditor. (Call for bids lately noted.)

Tex., Boston.—Bowie county contemplates voting on \$500,000 bond issue for road improvements. Address County Commissioners.

Tex., Greenville.—City awarded contract to Texas Bitulithic Co., Dallas Tex., to pave E. Lee St. from public square, distance of five blocks.

Tex., Mexia.—Judge W. H. Keeling, Groesbeck, Tex., states recently-noted bond proposition failed to carry in Mexia precinct.

Tex., Palestine.—Precinct No. 1 of Anderson county asked Public Highway Commissioner at Washington, D. C., for expert to offer suggestions, etc., for construction of roads; Judge Funderburk may be addressed. (Bond issue of \$150,000 recently noted voted.)

Tex., Teague.—City has \$30,000 available for work recently noted awarded to Johnson & Childs of Teague; streets to be graded and clay to be used on sandy portions; no paving; J. G. Browne, Houston, Tex., engineer in charge.

Tex., Wharton.—City awarded contract to construct additional sidewalks at cost of \$4000; G. S. Gordon, Mayor. (Recently noted.)

Va., Lynchburg.—Southern Railway, B. Herman, chief engineer, 1300 Pennsylvania Ave. N. W., Washington, D. C., awarded contract to J. L. Ford & Co. to macadamize 17th St. extended between Spring Valley Branch and Fishing Creek.

Va., Portsmouth.—Norfolk County Board of Supervisors awarded contract for construction of sand-clay automobile road from Ocean View to Hampton Roads Yacht Club at end of Willoughby Spit.

Va., Richmond.—Common Council appropriated \$5000 for construction of Gordonsville-Richmond-Williamsburg highway; P. St. J. Wilson, State Commissioner of Roads, Richmond.

Va., Roanoke.—Roanoke county contemplates construction of sand and clay road from Villa Heights to Salem, Va. Address County Commissioners.

Va., Spotsylvania.—Livingston district of Spotsylvania county will vote on \$70,000 bond issue for road improvements. Address County Commissioners.

Va., Spotsylvania.—Berkeley district of Spotsylvania county will vote November 7 on \$30,000 bond issue for road construction. Address County Commissioners. (Recently mentioned.)

W. Va., Edgewood, P. O. Wheeling.—Town awarded contract to Springer & Springer to pave Edgington lane.

W. Va., Chester.—Grant district of Hancock county voted on \$125,000 bond issue for road improvements. Address County Commissioners, New Cumberland, W. Va.

W. Va., Huntington.—City will pave sections of 19th St. and Eleventh Ave. with vitrified brick; bids received until November 1; John Coon, Commissioner of Streets and Public Property. (See "Machinery Wanted.")

W. Va., Piedmont.—City will grade and pave Fairview St.; bids received until October 21; Charles T. Neff, W. A. Shuey and P. J. O'Brien, street committee. (See "Machinery Wanted.")

W. Va., Wheeling.—Ohio County Commissioners awarded contract to Holderman Bros., Benwood, W. Va., at \$11,787 to pave Glendale Rd. with vitrified brick from Newman's Run to Moundsville; work will include retaining wall.

SEWER CONSTRUCTION

Ark., Little Rock.—City contemplates construction of storm sewer to drain about 70 acres in Eastern Little Rock.

Tex., Fort Valley.—City will soon let contract to construct four miles of sewers; J. W. Rundell, Mayor. (See "Machinery Wanted.")

Tex., Summerville.—Village awarded contract to Guild & Co., Chattanooga, Tenn., at \$11,000 to construct sewer system; about 10,

000 feet 24, 18, 15, 10, 8 and 6-inch pipe; Geo. W. Summers, engineer, 412 Dyer Bldg., Augusta, Ga. (Call for bids lately noted.)

Ky., Harlan.—Board of Trustees, R. A. Baker, chairman, awarded contract for sewer 1400 feet on Central Ave.; contemplates extension of system over entire town. (Bids recently noted.)

Ky., Louisville.—Board of Public Works ordered construction of sewer on both sides of 3d St. from L to N St., and on 5th St. from O St. to Central Ave.; cost about \$4000.

La., Monroe.—City will expend \$35,000 to construct reinforced concrete conduit; 4800 feet long; 4 feet 6 inches wide and 4 feet 3 inches high; contract recently noted awarded to H. E. Markwood, Monroe.

Miss., Amory.—City voted \$65,000 bond issue to construct sewers and water-works; plans prepared by Solomon-Norcross Co., Candler Bldg., Atlanta, Ga.; plans ready by November 15.

Mo., Kansas City.—City awarded contract to Rushmore & Gowdy at \$19,908 to construct sewers on various streets.

Mo., Excelsior Springs.—City contemplates voting on \$15,000 bond issue for sewers. Address The Mayor.

Mo., Kansas City.—Board of Public Works will soon invite bids for construction of section of main sewer along north side of Brush Creek from Tracy Ave. to temporary outlet in Brush Creek at Jackson Ave.; distance three miles; diameter of two feet at Tracy Ave. and increase to 5 feet 10 inches at Jackson Ave.; cost \$111,000; plans are also being prepared for section of main sewer along north side of Brush Creek from Tracy Ave. west to State line, and for another main sewer following south side of Brush Creek to receive drainage from water shed on the south; latter will begin with diameter of two feet at Holly St. and increase to six feet at Jackson Ave.

N. C., Weldon.—City engaged W. C. Ridick, civil engineer, Raleigh, N. C., to prepare preliminary surveys for sewer system; W. W. Wiggins, Mayor. (See "Water-works.")

N. C., Wilmington.—W. E. Merritt, superintendent of sewers, advises Manufacturers Record that about \$190,000 will be available for sewers; no definite plans; may be able to announce plans about November 15. (Contemplated sale of Wilmington Sewerage Co.'s plant to city recently noted.)

S. C., Columbia.—City will construct sewers and water mains on Blanding, Elmwood, Gadsden, Green, Gregg and Lauren Sts. and Gibbes Ct.; work will comprise about 2640 feet of eight-inch sewers and 2600 feet six-inch water pipe; bids received until October 19; F. C. Wyse, engineer-superintendent. (See "Machinery Wanted.")

Tenn., Jellico.—City will construct 5.7 miles to 15-inch pipe sewers; bids received until 2 P. M. November 1; Walter G. Kirkpatrick, engineer, Jackson, Miss.; A. B. Mahan, secretary Water-Works and Sewer Commission; proposed construction previously noted. (See "Machinery Wanted.")

Tenn., Nashville.—Tuberculosis Hospital Commission awarded contract to Peebles & McKittrick at \$351.25 to construct sewer from Tuberculosis Hospital to Cumberland River.

Tenn., Maryville.—City, A. K. Harper, Mayor, defeated bond issue recently noted; contemplates granting franchise for construction of sewer system, etc. (See "Water-works" and "Machinery Wanted.")

Tex., Dallas.—City is arranging for construction of proposed sewage-disposal and filtration plants; is consulting with John B. Hawley, engineer, Fort Worth, Tex.; city authorized \$50,000 bond issue for sewage-disposal system; will probably vote in April on bond issue for filtration plant; J. M. Preston, City Engineer.

W. Va., Huntington.—City will construct lateral sewers, 12, 15 and 18 inches in diameter; bids received until November 1. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Ala., Ensley.—People's Telephone Co. will install switchboard costing \$10,000 and other equipment.

Okl., Red Fork.—Limestone Rural Telephone Co. incorporated with \$2500 capital stock by F. O. Brown and Lincoln Postock, Red Fork, and J. F. Russell, Fisher, Okla.

Tex., Fort Stockton.—Pecos & Rio Grande Telephone Co. elected James Rooney, president; George Miller, vice-president; R. T. Durrett, secretary and general manager. (Recently noted incorporated with \$120,000 capital stock.)

Fla., Brooksville.—City will vote on proposition to grant franchise to Mr. Fuller, Umatilla, Fla., to construct water-works. (See "Electric Plants.")

Fla., Fort Barrancas.—Newport Construction & Engineering Co., Newport News, Va., is lowest bidder at \$4400 to construct exten-

Stephens, A. L. Bowersock, Charles Ludwig, S. A. Reeder and others.

TEXTILE MILLS

Ga., Atlanta.—Cotton Yarns.—G. E. Higgins of Farish-Stafford Company, New York purchased Elizabeth Cotton Mills; reported as to organize company with capital stock of from \$300,000 to \$500,000 to improve and operate plant; will probably install 5000 additional spindles and necessary looms.

Ga., Lawrenceville.—Hosiery Yarns.—Gate City Mills, East Point, Ga., leased plant of Lawrenceville (Ga.) Manufacturing Co. and is overhauling equipment to begin operations November 1.

Ga., Savannah.—Cotton Underwear.—Emory S. Harris, secretary Board of Trade, Bennington, Vt., is reported as representing company contemplating erection of knitting mill to produce cotton underwear.

Md., Thurmont.—Hosiery.—Union Manufacturing Co., Frederick, Md., secured building, 50x60 feet, and will install 20 knitting machines for the production of hosiery.

Miss., Wesson.—Cotton and Woolen Yarns.—Lane Cotton Mills Co., New Orleans, La., states Textile Mills Corporation, reported last week as to be taken over by new company, is out of existence, and report as to this and installation of new equipment is incorrect.

N. C., Cherryville.—Sheetings.—Vivian Cotton Mill advises Manufacturers Record it will issue \$30,000 of preferred stock, but will not enlarge plant. (Recently mentioned.)

N. C., Stanley.—Cotton Yarns.—Mariposa Cotton Mills incorporated with authorized capital stock of \$50,000; incorporators, R. H. Morrison, J. G. Morrison and Jennie Morrison, Stanley; Ronald Wilson and Anna Wilson, Brevard, N. C.; Mary G. Rayall, Statesville, N. C., and A. O. Morrison, Atlanta, Ga.

S. C., Greenwood.—Cotton Yarns.—Panola Cotton Mills, Incorporated last year with a capital stock of \$300,000, will issue \$110,000 of preferred stock, making total of \$410,000 of preferred and common stock.

Va., Richmond.—Ribbons.—Virginian Silk Ribbon Corporation, to be capitalized at \$250,000, is being promoted by Hugh L. Kirby, Harper's Ferry, W. Va.; W. S. Wortham, Richmond; William M. de Pars, Hagerstown, Md., and others to establish ribbon factory; buildings and equipment reported as to be effected October 12.

Va., Williamsburg.—Underwear.—Charles C. Groat purchased Williamsburg Knitting Mills Co.; will erect buildings, 150x40 feet, 40x70 and 50x60 feet; install additional equipment, including 40-rib body machines, 100 sewing machines, dyeing and bleaching plant, etc.; plant to be completed in about 60 days. (Recently mentioned.)

WATER-POWER DEVELOPMENTS

Ky., Louisville.—W. O. Head, Mayor, and others are developing plans for proposed power canal, 30 feet wide and 20 feet deep, beginning at Ohio River, four miles east of city, running south five miles to a lake 50 yards in diameter; thence west to river; turbine to be placed in canal to furnish power for industrial plants; estimated cost of canal, including digging, walling and installation of turbines and dams, \$5,000,000; engineers now making preliminary investigations, and it is reported that matter may be laid before Congress, probably at next session.

WATER-WORKS

Ala., Mobile.—City Commissioners authorized extension of city water service to Oakdale and Bascombe tract; work will include six-inch water main westwardly from Marine St. on Baltimore to Kelly St. and of like main on Bay Ave. from Marine to O'Donnell in Oakdale; also extension of two-inch wrought-iron pipe on Baltimore to Bascombe St., Bay Ave. through O'Donnell, westwardly on Franklin to Ross St., etc.; C. W. Soost, superintendent of water-works.

Ark., Marked Tree.—City will construct water-works, including pumping plant and tank, and system of combined sewers and for water and sewer improvement district No. 1; bids received until October 20; J. A. Wright, engineer, Marked Tree. (See "Machinery Wanted.")

Fla., Brooksville.—City will vote on proposition to grant franchise to Mr. Fuller, Umatilla, Fla., to construct water-works. (See "Electric Plants.")

Fla., Fort Barrancas.—Newport Construction & Engineering Co., Newport News, Va., is lowest bidder at \$4400 to construct exten-

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MANUFACTURERS RECORD.

Md., Baltimore.—Misses W. C. and A. K. Bean are having plans prepared by Henry J. Tinley, 314 N. Charles St., Baltimore, for cottage at Hill Top Park; two and a half stories; ornamental frame; overhanging slate roof; concrete foundation; porches on three sides.

Md., Baltimore.—Frank Novak, 2808 Jefferson St., is having plans prepared by Joseph Hiltz, 2808 Jefferson St., Baltimore, for 10 dwellings at 2612-30 E. Madison St.; two stories; brick; 14x48 feet; electric lights; hot-water heat; iron-spot brick fronts; white marble basins and trimmings.

Md., Baltimore.—Roland Realty Co. is having plans prepared by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for 33 dwellings on 27th St. between Elm and Chestnut Sts.; two stories; about 13x52 feet; cost \$66,000.

Md., Baltimore.—A. B. Disney, 2225 E. Pratt St., will erect residence at Allis Terraces; two and a half stories; frame; steam heat; slate roof; Webb & White, Maryland Telephone Bldg., Baltimore, will have charge of work.

Md., Baltimore.—A. Warren Edwards has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for six dwellings on Chelsea Ave.; two stories; semi-detached; porch fronts; five 11x52 feet; one 25x55 feet; electric lights; hot-water heat; cost \$14,000.

Md., Round Bay (not a postoffice).—John A. Delves, The Walbert, Charles and Lafayette Aves., Baltimore, Md., will erect bungalow; white stucco.

Mo., Kansas City.—Monroe F. Cockrell of Traders' National Bank will erect residence. Mo., Kansas City.—Miss N. M. Huff will erect residence; cost \$7000 to \$8000.

Mo., Kansas City.—A. J. King will erect four brick veneer, three stone-veneer, one brick and one stucco dwelling; cost \$31,000.

Mo., Kansas City.—M. L. Slade will erect residence; frame construction; cost \$3000.

Mo., Kansas City.—C. L. Bliss will erect residence; frame; cost \$5000.

Mo., Kansas City.—Block & Guerlinger will erect residence; stucco construction; cost \$300.

Mo., Kansas City.—C. L. Brown will erect residence; stone veneer; cost \$5000.

Mo., Kansas City.—U. Perrine will erect residence; stucco; cost \$4000.

Mo., Kansas City.—I. L. Yose will erect three dwellings; stucco; cost \$6000.

Mo., Kansas City—Home Land & Building Co. will erect three dwellings; frame; cost \$6000.

Mo., Kansas City.—W. T. Thornbury will erect two frame dwellings; cost \$3200.

Mo., Kansas City.—Caton & King will erect two dwellings; frame; cost \$4000.

Mo., Kansas City.—H. B. Gernag will erect dwelling; stucco; cost \$4000.

Mo., St. Louis.—Dawson Investment Co. will erect two two-story dwellings; cost \$5000.

N. C., Asheville.—Roger Lamson will erect residence; eight rooms; cost \$3050.

N. C., Asheville.—Catherine Williams will erect residence; eight rooms; cost \$3000.

N. C., Wilmington.—E. B. Snipes has plans by L. A. H. Koeth, Wilmington, for dwelling; two stories; frame; ordinary construction; electric lighting; tin roof.

Okl., Oklahoma City.—C. P. Sites will erect residence; cost \$6000.

Okl., Oklahoma City.—P. M. Moore will erect dwelling.

Okl., Tulsa.—E. D. Smith will erect dwelling; two stories; cost \$3000.

S. C., Chester.—J. T. Collins will erect residence.

S. C., Greenville.—Dr. A. A. Odom is having plans prepared by D. H. Attaway, 117½ N. Main St., Greenville, for dwelling; cost \$3000.

Tenn., Nashville.—Mrs. H. M. Killis will erect residence; brick; cost \$4500.

Tenn., Nashville.—H. F. Smith will erect residence; two stories; brick; cost \$10,000.

Tex., Dallas.—James P. Griffin will erect residence; brick veneer; cost \$10,000.

Tex., El Paso.—E. N. Hall will erect eight dwellings; California bungalow style; six rooms and sleeping porch; total cost \$16,000.

Va., Berkley, Station Norfolk.—Armistead Dashell will erect residence; two stories; frame; construction begun.

Va., Elba.—Baptist congregation will erect parsonage. Address The Pastor, Baptist Church.

Va., Elba.—Dennis Dalton is preparing plans for residence; cost \$6000.

Va., Hot Springs.—Mary Johnston, Richmond, Va., will erect residence.

Va., Norfolk.—Dr. T. W. Williamson has plans by Lee & Diehl, Norfolk, for residence.

Va., Norfolk.—Charles Tunstall and Richard Tunstall have plans by Mr. Everman for two dwellings in Ghent; terra-cotta; brick and shingles.

Va., Richmond.—Robert Lecky, Jr., will erect dwelling; two stories; brick; cost \$3500.

Va., Richmond.—W. S. Drewry will erect dwelling; detached; two stories; brick; cost \$3000.

Va., Richmond.—W. S. Drewry will erect dwelling; two stories; brick; cost \$3000.

Va., Martinsburg.—H. P. Thorn will erect residence on West King St.; concrete foundation; construction begun.

GOVERNMENT AND STATE

Ala., Jasper—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect Federal building.

Ark., Little Rock—Asylum.—State Board of Charities, R. W. Hart, secretary, will remodel building for negro female patients.

D. C., Washington—Bureau of Printing and Engraving, Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Proposals received in this office until 3 P. M. November 16, and then opened, for construction, including roof and ground-surface drainage system, of fireproof building for Bureau of Engraving and Printing; four stories; stone faced; 90,000 square feet of ground area; drawings and specifications will be ready after October 21 and may be obtained at this office at discretion of supervising architect.

Md., Frederick—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., selected site for proposed postoffice building, for which Congress appropriated \$25,000.

S. C., Sumter—Stockades.—State awarded contract to George W. Waring, Columbia, S. C., to erect two stockades on State farms of Sumter county, each to accommodate 90 prisoners; cost \$37,000.

S. C., Newberry—Postoffice.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Proposals received at this office until 3 P. M. November 10 (extended date) and then opened for construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring and lighting fixtures) of United States postoffice at Newberry in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Newberry or at this office at discretion of supervising architect. (Recently noted.)

Tenn., Cookeville—Postoffice and Federal Court.—Treasury Department, James Knox Taylor, supervising architect, Washington, will erect postoffice and Federal Court building.

Tenn., Fayetteville—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., purchased site for proposed postoffice building.

Tex., San Antonio—Hospital.—Southwestern Insane Asylum will receive bids through architect, Atlee B. Ayres, 626 Bedell Bldg., San Antonio, about December 1 to erect hospital; 60x100 feet; fireproof construction; steam heat; electric lighting; cost \$55,000. (Recently noted.)

Tenn., Austin—Hospital.—Managers of State Insane Asylum will soon award contract to remodel laundry building for hospital; certified check for \$500, payable to Dr. Preston; plans at office of Endress & Walsh, architects, Austin, and at asylum.

HOTELS

Ala., Birmingham.—C. H. Nabb Hotel Co. incorporated with \$50,000 capital stock; C. H. Nabb, president; H. L. Bailey, vice-president; G. H. McLinn, secretary; Mr. Nabb previously noted to expend \$60,000 for improvements to Hillman Hotel.

D. C., Washington.—O. G. Staples, proprietor of Riggs House, has plans by Appleton P. Clark, Jr., 816 14th St. N. W., Washington, for hotel at 1307-1309 F St. N. W.; 11 stories; 120 rooms; 100 baths; fireproof; steel and terra-cotta; cost about \$300,000.

Fla., Anastasia.—W. R. Stokely of St. Augustine, Fla., is promoting establishment of summer and winter resort at Bird Island and Anastasia Island and erection of hotel on latter; 100 rooms; 75 rooms with private baths; concrete construction; shape of cross; office in center wainscoted with marble; roof garden.

Md., Baltimore.—James H. Fledderman,

Terrace Apartments, acquired Carrollton Hotel on St. Paul St., near Baltimore St., and will remodel and improve; will enlarge and refresh dining-room, install additional lights, etc.; B. F. Hilgert, manager.

Md., Baltimore.—Monumental Brewing Co., 3900 E. Lombard St., will erect hotel and restaurant building. (See "Miscellaneous.")

S. C., Walterboro.—R. H. Wichman has plans by J. D. Newcomer, Charleston, S. C., for proposed hotel; 25 bedrooms, office, lobby, etc.; steam heat; electric or gas lights; 85x100 feet.

Tenn., Memphis.—Isaac Reese is interested in erection of proposed hotel on Calhoun Ave.; three stories; 40 rooms; cost \$20,000; plans by Alsop & Smith.

Tex., Dallas.—J. W. West, Box 74, Decatur, Ga., will not at present erect addition to hotel recently noted.

Va., Richmond.—Chester Hotel & Improvement Co. incorporated with \$20,000 capital stock by A. Lee Thaw, president; W. M. Dunn, vice-president; John F. Vaughan, secretary.

W. Va., Wheeling.—Fidelity Investment Co. is promoting erection of hotel; nine stories; cost about \$600,000; plans by Edward Bates Franzheim, Schmulbach Bldg.

MISCELLANEOUS

Ala., Attala—Hospital.—Dr. John P. Stewart will erect private hospital to be known as Good Samaritan Hospital.

Ga., Atlanta—Chapel, etc.—Hollywood Cemetery Co., S. W. Foster, president, will expend about \$20,000 for various improvements to Hollywood and Rose Hill cemeteries, including stone and cement chapel, waiting-rooms, etc. (See "Land Development.")

Ga., Rome—Hospital.—J. N. King and others are promoting erection of general hospital; two or three stories; reinforced concrete; 32 beds; 25 private rooms, offices, kitchens, laboratories, operating-rooms, etc.

Ia., Mandeville—Casino.—A. D. Plaggo will erect casino.

Ia., New Orleans—Sheds.—Louisville & Nashville Railway, W. H. Courtenay, chief engineer, Louisville, Ky., will erect extension to sheds.

Md., Baltimore.—Monumental Brewing Co., 3900 E. Lombard St., will erect hotel and restaurant building; ordinary construction; 30x75 feet; three stories. (Recently mentioned.)

Md., Baltimore—Nurses' Home.—Hebrew Hospital, Monument St., near Broadway, has plans by Parker, Thomas & Rice, Union Trust Bldg., Baltimore, for nurses' home; three stories; brick; stone trimmings; 46x100 feet; cost about \$50,000; contractor estimating are John Hiltz & Son, 3 Clay St.; Edward Brady & Sons, 1109-11-13 Cathedral St.; Monmonier & Sorrell, 1711 McCulloch St., and Consolidated Engineering Co., Emerson Tower Bldg., all of Baltimore. (Previously noted.)

Md., Baltimore—Hospital.—Dr. A. S. Warner, 327 Highland Ave., and associates are promoting erection of hospital for Canton and Highlandtown, with surgical and medical wards, operating-rooms and accommodations for 25 beds; cost about \$25,000; Dr. David W. Jones, 316 O'Donnell St., chairman of committee.

Miss., Gulfport—Fair Building.—Gulf Coast Exposition Co. plans to erect woman's building.

Mo., St. Louis—Turnverein.—St. Louis Turnverein will erect building.

Okl., Talequah—Clubhouse.—Fox Hunters' Organization, Judge Pitchford, president, plans to erect clubhouse 12 miles south of Talequah.

S. C., Charleston—Sanatorium.—Drs. A. E. Baker and L. R. Craig will erect sanatorium to be known as Baker-Craig Sanatorium; four stories; pressed brick, stone and concrete; to accommodate 70 to 100 patients.

Tenn., Nashville—Clubhouse.—Nashville Tennis Club, Henry B. Cain, president, plans to erect clubhouse.

Tex., Paris—Sanitarium.—Sisters of Incarnate Word will not at present erect sanitarium. (Recently noted.)

W. Va., Wheeling—Home.—Sisters of the Good Shepherd plan to erect home to replace structures reported burned at loss of about \$20,000.

RAILWAY STATIONS

Ala., Cullman.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect passenger station; concrete and brick; tile roof; cost \$60,000; will expend about \$200,000 for various improvements, including passenger and freight stations. (Recently noted.)

Ala., Bessemer.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky.; Southern Railway, B. Herman, chief engineer, 1300 Pennsylvania Ave., N. W., Washington, D. C., and Atlanta, Birmingham & Atlantic Railroad, Alex. Bonnyman, general manager, Atlanta, Ga., will, it is reported, erect union depot.

Ark., Calion.—St. Louis, Iron Mountain & Southwestern Railway, E. F. Mitchell, chief engineer, St. Louis, Mo., is reported to erect station.

Ark., Fair Oaks.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., and St. Louis, Iron Mountain & Southwestern Railway, E. F. Mitchell, chief engineer, St. Louis, Mo., will, it is reported, erect union passenger station.

Ark., Helena.—St. Louis, Iron Mountain & Southwestern Railway, E. F. Mitchell, chief engineer, St. Louis, Mo., will, it is reported, erect passenger station.

Ark., Kedron.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., is reported to erect station.

Ky., Sturgis.—Illinois Central Railway, A. S. Baldwin, chief engineer, Chicago, Ill., will erect depot.

S. C., Lancaster.—Southern Railway, B. Herman, chief engineer, 1300 Pennsylvania Ave. N. W., Washington, D. C., contemplates improving, enlarging and re-equipping depot.

Tex., Cameron.—Gulf, Colorado & Santa Fe Railroad, C. F. Merritt, chief engineer, Galveston, Tex., is reported to erect depot; 100x125 feet.

Tex., Galveston.—Atchison, Topeka & Santa Fe Railway, F. Merritt, chief engineer, Topeka, Kan., is reported to erect passenger station; eight stories; steel and reinforced concrete; 100x125 feet.

Tex., Galveston.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, approved plans for proposed union station; reinforced concrete; fireproof; faced with white-enamed brick; eight stories; waiting-rooms connected by 20-foot passageway; four-story intermediate structure with frontage of 58 feet, connecting present station with general office building; separate baggage-room 26x100 feet; storage-house 17x26 feet; baggage-room opening on midway 40 feet wide, extending across west frontage and opening on train sheds, with concrete platforms; cost about \$450,000.

SCHOOLS

Ala., Montevallo.—Montevallo School, Dr. T. W. Palmer, president, will make improvements to school; will expend \$300,000 within next four years.

Ala., Tuscaloosa.—City will vote October 23 on \$35,000 bond issue for school improvements; S. H. Sprott, Jr., president of City Commissioners.

Fla., Gainesville.—School Trustees rejected all bids to erect proposed addition to graded and high-school building; cost about \$22,500; Dr. J. L. Kelet, County Superintendent.

Ga., Athens.—University of Georgia will soon begin erection of proposed farm mechanics building.

Ga., Atlanta.—Mrs. Ida Richards Compton, secretary to Dr. R. S. McArthur, plans to erect school and establish university for mountaineers in Georgia to be known as Golden Age University.

Ga., Athens.—State College of Agriculture, Leroy Hart, professor in charge, will erect proposed building; 40x100 feet.

Ga., Cairo.—Grant School District voted \$30,000 bond issue to erect high school. Address District School Trustees.

Ga., Fort Valley.—W. L. House, chairman, may be addressed relative to erection of school building to cost \$25,000. (Recently noted.)

Ga., Bainbridge.—City will vote October 28 on \$50,000 bond issue for school improvements. Address The Mayor. (Previously noted.)

Ky., Paducah.—City will vote (probably in November) on \$75,000 bond issue to erect schools; J. A. Carnagey, superintendent of schools.

Ky., Pineville.—City will vote November 7 on \$30,000 bond issue to erect school building; F. A. Heath, City Clerk. (Recently noted.)

Ia., Ama.—St. Charles Parish School Board, Luther A. Youngs, president, Paraiso, La., will expend \$2200 each to erect schools at Ama and St. Rose, La.; 60x42 feet; mill construction; hot-air heat; T. B. Sellers, secretary, may be addressed; recently noted.

to receive bids until October 24. (See "Machinery Wanted.")

La., Columbia.—City is planning to erect high-school building to replace structure reported burned. Address The Mayor.

La., St. Rose.—St. Charles Parish School Board, Luther A. Youngs, president, Paradis, La., will expend \$200 each to erect schools at St. Rose and Ama, La., recently noted; 60x42 feet; T. B. Sellers, secretary, may be addressed. (See La., Ama.)

La., St. Rose.—Rev. Abbott Paul of Benedictine College plans to erect dormitory.

Miss., Benton.—Yazoo county, W. W. Lockard, superintendent, Yazoo City, Miss., will erect buildings for agricultural high school.

Miss., Brookhaven.—City will erect \$15,000 addition to school. Address The Mayor.

Miss., East Side.—Town will probably issue \$3000 of bonds to erect school; J. B. U. Raby, Mayor.

N. C., Gastonia.—Gaston County Commissioners will vote November 11 on \$25,000 bond issue to erect county farm-life school. Address County Commissioners.

N. C., Raleigh.—Agricultural and Mechanical College will let contract about November 1 to erect Young Men's Christian Association building; three stories; brick; reinforced concrete; tin roof; swimming pool; auditorium, gymnasium, reading-room, etc.; terra-cotta and limestone trimmings; ordinary construction; cost \$40,000; plans by Henry E. Bonitz, Wilmington, N. C., and may be had from him. (Previously noted.)

N. C., Troy.—City voted \$20,000 bond issue to erect school; R. E. Ranson, superintendent. (Recently noted.)

N. C., West Durham.—Durham County Board of Education, Durham, will erect school.

Okl., Guthrie.—Methodist University of Oklahoma is having plans prepared by Arthur G. Dole, Guthrie, for university buildings; six or eight in number when completed; at present administration building only will be erected; cost \$100,000; plans not completed. (Recently noted.)

Okl., Purcell.—Bids received by A. J. French until noon October 10 to erect two-story brick school in district No. 24, McClain county; plans and specifications at office of Mr. French at Purcell, or of T. J. Galbraith, architect, Chickasha, Okla.; certified check for \$250,000, payable to H. A. Perkins, clerk of district.

S. C., Due West.—Euphemian Literary Society of Erskine College is having plans prepared by J. H. Casey, Anderson, S. C., for society hall; 45x50 feet; brick; heating and lighting not decided; cost \$6000; date of opening bids not set. (Recently noted.)

S. C., Rock Hill.—Bids received at office of D. B. Johnson, chairman, Winthrop College, until October 24 to erect training school in connection with college (recently noted); reinforced concrete; brick walls; terra-cotta trimmings; tile roof; certified check for \$5000; drawings and specifications on file at office of William A. Edwards, 632 Candler Bldg., Atlanta, Ga.; contractors may obtain drawings, etc., from architect upon deposit of \$25; subcontractors may procure drawings by payment of \$10; also at same time for erection of industrial arts and science building; certified check for 1 per cent. amount of bid, payable to Mr. Johnson; drawings and specifications on file after October 14 at office of Mr. Johnson at Rock Hill; Hook & Rogers, architects, Charlotte, N. C., and D. W. McLaurin, State House, Columbia, S. C.

Tenn., Memphis.—Board of Education, A. B. Hill, secretary, Goodwyn Institute Bldg., will receive bids until noon October 24 for erection of addition to Merrill School; certified check for \$250; plans and specifications at office of Jones & Furbringer, architects, 110-12 Porter Bldg., Memphis.

Tenn., Nashville.—George Peabody College for Teachers is having plans prepared by Ludlow & Peabody, 12 W. 31st St., New York, for college buildings; administration and two dormitory buildings to be erected at once at cost of about \$500,000; other buildings to be planned during construction of first buildings; light stone construction; architects to superintend construction.

Tex., Foard.—Foard city school district voted \$6000 bond issue to erect school. Address District School Trustees.

Tex., Brownsville.—City will erect frame school building as auxiliary to present structure; J. H. Grant, chairman of committee.

Tex., College Station.—Agricultural and Mechanical College, Walton Petet, president board of directors, Fort Worth, Tex., will open bids in about six weeks to erect fireproof dormitory; cost \$75,000; plans by F. E. Geisecke, College Station. (Recently noted.)

Tex., Fort Worth.—School Board purchased site to erect proposed Seventh ward school.

Tex., Harrisburg.—L. L. Pugh, superintendent, Houston, Tex., will receive bids until October 16 to erect two-story brick school; certified check for \$500,000, payable to Mr. Pugh; plans and specifications at office of F. S. Glover, architect, 324 Mason Bldg., Houston, Tex. (Recently noted.)

Tex., Huntsville.—Walker County School Commissioners plan erection of five additional schools.

Tex., Marfa.—School Board of District No. 1, O. L. Nicholls, secretary, will receive bids until October 14 to erect two wings to high-school building, consisting of four rooms, necessary halls, stairways, basements, etc.; El Paso brick of certain standard; certified check for \$100; completion by February 1, 1912; plans and specifications at office of County Judge at Marfa or of S. B. Haggart, 706 Myrtle Ave., El Paso, Tex.

Tex., Seguin.—Rev. J. Romberg will receive bids through C. H. Page & Bro., architects, Austin, Tex., until 11 A. M. November 2 to erect college and servants' buildings for Luthern College; separate bids for heating, plumbing and wiring; certified check for \$1000, payable to C. T. Schawer, treasurer; plans and specifications from architects on deposit of \$25.

Va., Radford.—Radford State Normal School, John Preston McConnell, president, will expend \$150,000 to \$200,000 to erect proposed school; board of trustees will receive bids at the Capitol, Richmond, Va., November 14; G. E. Cassel, secretary, East Radford; usual rights reserved.

Va., Salem.—School Board of Salem District, Roland E. Cook, superintendent, opened bids for erection of high-school building to cost about \$17,000; contractors estimating are Sears & Brown, Camden Iron Works, both of Salem; Wilmuth & Richardson, A. L. Marshall, both of Roanoke, Va.; Turner & Olds, Lynchburg, Va. (Previously noted.)

Va., Staunton.—Beverly Manor School District, John W. Todd, clerk, Route 3, Staunton, has not selected architect to prepare plans for school building to contain eight rooms; cost \$10,000. (Recently noted.)

STORES

Ala., Birmingham.—Birmingham Realty Co. will erect one-story frame building; cost \$4000; day labor.

Ala., Birmingham.—J. A. Coates will erect business building; four stories; brick; cost \$9000.

Ala., Eufaula.—M. M. Reeves will erect wholesale grocery store and feed-mixing plant; 40x100 feet; brick and stone foundation; electric wiring; cost \$3000 to \$4500; day labor. (See "Machinery Wanted.")

Ala., Eufaula.—M. M. Reeves will erect business building; two stories; brick.

Ala., Heflin.—Atkins & Amens will erect annex to store building; two stories; brick; construction begun.

D. C., Washington.—William E. Estis has plans by Oscar G. Vogt, 405 Corcoran Bldg., Washington, for improvements to building at 535 15th St. N. W.; cost \$6000.

Fla., Callahan.—Woodmen of the World will erect store, office and lodge building. (See "Association and Fraternal.")

Fla., Callahan.—Dr. J. W. Smith will erect store and dwelling. (See "Dwellings.")

Fla., Jacksonville.—Samuel F. Flood is reported as contemplating erection of store and apartment building; brick construction.

Fla., Jacksonville.—C. W. Scott will erect one-story frame buildings.

Fla., Jacksonville.—N. Graves will erect business building; two stories; brick.

Ga., Atlanta.—Mrs. C. B. Rosser will erect one-story brick business building; tar and gravel roof; cost \$3000.

Ga., Atlanta.—John W. Grant contemplates remodeling building at 11-15-17 N. Forsyth St.; cost \$8000.

Ga., Doerun.—Messrs. Flemming, Leon Perry and C. A. Edwards will erect three stores; brick construction.

Ga., Savannah.—Collins Bros. Co. purchased property at Congress and Drayton Sts. and will make improvements, including erection of five stores to cost \$15,000; remodel building at corner for offices and building at Abercorn and Congress Sts. for apartments.

Mo., Kansas City.—Hoffman Bros. will erect store building; three stories; brick; cost \$15,000.

Mo., Kansas City.—Willard I. Rush will erect business building on Westport Ave.

Mo., Kansas City.—George R. Ferguson will erect \$15,000 store building.

Mo., St. Louis.—E. Freund & Sons will erect two-story store and tenement building; cost \$4550.

N. C., Greensboro.—Frank M. Fields will erect store building; two stories; brick; 25x75 feet; plate-glass windows.

N. C., Selma.—Selma Supply Co. will erect business building; brick.

Okla., Tulsa.—Tulsa Wholesale Grocery Co., E. 1st St., will erect business building; two stories and basement; brick.

S. C., Liberty.—T. A. Gary will expend \$300 to \$500 to erect store building recently noted; 47x30 feet; fireproof construction; elevator; plans by D. H. Attaway, 117½ N. Main St., Greenville, S. C.; bids opened. (See "Machinery Wanted.")

S. C., Sumter.—Manning Rowland-Shore Company will erect business buildings.

S. C., Greenville.—W. W. Burgiss will erect four store buildings in rear of Grand Opera house.

Tenn., Alamo.—Messrs. Fleming, Conley & McLean will erect business building.

Tenn., Chattanooga.—Clemens Bros. will erect business building; brick; four stories; 42x36 feet.

Tenn., Nashville.—John A. Hawkinson, care Schwarzbach & Sulzberger, Union Stock Yards, Chicago, Ill., purchased site on Ninth Ave., and will, it is reported, erect business building.

Tenn., Knoxville.—Dr. E. L. Watkins will erect building for drug store and doctor's office. (See "Bank and Office Buildings.")

Tex., Aransas Pass.—H. Brooks will expend \$4000 to erect business building; 25x80 feet; two stories; semi-fireproof construction; steam heat; electric lighting; plans by J. O. McBride, Aransas Pass; construction by owner. (Recently noted.)

Tex., Dallas.—J. W. Crowder Drug Co., J. T. Berry, president, will erect business building; eight stories and basement; fireproof; 17x165 feet.

Tex., Inez.—H. C. Koontz will erect store building.

Tex., Pearsall.—J. M. Riggins will erect store building.

W. Va., Charleston.—Dr. A. H. Boyd will erect business building; two stories; brick.

THEATERS

Md., Baltimore.—Otto G. Simonson, American Bldg., Baltimore, is preparing preliminary plans for proposed vaudeville theater on Lexington St., between Liberty and Howard Sts.; fireproof; 85x125 feet; seating capacity about 2000; cost about \$175,000.

Miss., Gulfport.—L. L. Chevalley will expend \$10,000 to erect moving-picture parlor; 40x100 feet; gas heat; electric lighting; construction by owner. (Recently noted.)

Tex., San Marcos.—Representatives of J. R. Glass Construction Co., New York and Chicago, Ill., are reported as considering erection of opera house.

W. Va., Mateoaka.—Mateoaka Opera House, W. J. Elliott, secretary-treasurer, will expend \$7000 to erect theater; 38x70 feet; ordinary construction; low pressure steam heat; electric lighting; plans by G. R. Ragan, Mateoaka. (See "Machinery Wanted.")

Va., Richmond.—Chesapeake & Ohio Rail- way, H. Pierce, chief engineer of construction, will erect warehouse; three stories; brick, steel and concrete; cost \$17,000.

Va., Richmond.—Joseph A. Dart Tobacco Co. will expend \$38,000 to erect tobacco warehouse; 115x125 feet; mill construction; heating and lighting not decided; one hand-power and one steam-power elevator; plans recently noted prepared by Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond. Address architects. (See "Machinery Wanted.")

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Md., Baltimore.—J. Charles Linthicum and Seth H. Linthicum, 217-19 Courtland St., opened bids to erect apartment-house at Park Ave. and Whitelock St.; Sweetzer Linthicum, 231 Courtland St., Baltimore, is lowest bidder; plans by Charles E. Cassell, Law Bldg., Baltimore, call for structure 146x73 feet; 10 stories; pressed brick and Indiana limestone; terra-cotta and granite trimmings; electric lights; hot-water heat; vacuum cleaning plant; fireproof construction; cost about \$175,000. (Recently noted.)

Miss., Columbus.—Misses Cody will erect apartment-house; cost \$10,000; Leavell Boston, contractor.

N. C., High Point.—A. Sherrod awarded contract to erect apartment and store building. (See "Stores.")

Va., Berkley Station, Norfolk.—W. W. Colonna awarded contract to John W. Jones, Norfolk, to erect apartment-house; brick; construction begun; size 44x80.6 feet; two stories; ordinary construction; cost \$8000.

BANK AND OFFICE

Fla., Tampa.—Commercial Building Co., G. A. Petteway, president, awarded contract to Falls City Construction Co., Louisville, Ky., to erect bank, store and office building at Florida Ave. and Twigg St.; 10 stories;

Salem and Roanoke, Va.; bids opened October 9. (Recently noted.)

WAREHOUSES

Ala., Atmore.—Atmore Warehouse Co. incorporated with \$10,000 capital stock by W. F. Lamont, E. F. Goldsmith and J. E. McCoy.

Ga., Atlanta.—Georgia Terminal Co. will erect additional warehouses for Atlanta, Birmingham & Atlantic Railroad; Alex. Bonnyman, general manager, Atlanta; cost of improvements about \$200,000.

Ga., Augusta.—City contemplates erection of fireproof warehouse on river bank between Center and Washington Sts.; Board of Public Works will probably determine cost.

Tex., Dalton.—Frank Shumate, Sam P. Madox and Julian McCamy will erect warehouse.

Ky., Springfield.—Springfield Loose Leaf Tobacco Warehouse Co. increased capital stock from \$12,000 to \$15,000.

Md., Baltimore.—Gottschalk Company, 108 11th Light St., is having plans revised by C. M. Anderson, 324 N. Charles St., Baltimore, for addition to building; one story; brick and stone; asbestos slate roof; contractors estimating are Willard E. Harn, 213 Calvert St.; Monmonier & Sorrell, 1711 McCullough St., and Henry L. Maas, 1119 Ensor St., all of Baltimore.

Mo., Brunswick.—Kansas City Missouri River Navigation Co., Kansas City, Mo., will erect warehouse.

Mo., St. Louis.—Walmer Building Co. will erect warehouse; two stories; cost \$8000.

Mo., St. Louis.—George E. Lloyd will erect office and warehouse building.

S. C., Bishopville.—Lee County Warehouse Co. incorporated with \$10,000 capital stock by G. M. McCutchen, L. A. Moore, L. H. Peebles and others.

S. C., Camden.—Farmers' Bonded Warehouse Co. incorporated with \$10,000 capital stock by L. L. Clyburn, L. I. Guion, W. J. Dunn and others.

S. C., Fort Lawn.—Fort Lawn Bonded Warehouse Co. incorporated with \$3000 capital stock by D. Ferguson, J. T. McCadden, S. A. McWatters and Hardin Adams.

Tex., El Paso.—Goodman Produce Co. will erect warehouse 40 feet high; cost about \$15,000; site 98x70x55 feet.

Tex., Houston.—H. D. Taylor & Sons will erect warehouse; two stories; brick; 100x100 feet; cost \$15,000.

Va., Louisa.—Farmers' Warehouse Association and Board of Trade are promoting erection of proposed tobacco warehouse.

Va., Richmond.—Chesapeake & Ohio Rail- way, H. Pierce, chief engineer of construction, will erect warehouse; three stories; brick, steel and concrete; cost \$17,000.

Va., Richmond.—Joseph A. Dart Tobacco Co. will expend \$38,000 to erect tobacco warehouse; 115x125 feet; mill construction; heating and lighting not decided; one hand-power and one steam-power elevator; plans recently noted prepared by Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond. Address architects. (See "Machinery Wanted.")

Ga., Atlanta.—Trust Company of Georgia will expend \$30,000 for improvements to Equitable Bldg.; fireproof construction; steam heat; electric lighting; electric elevator; plans by Morgan & Dillon, Atlanta; contract recently noted awarded to Gude & Co., Atlanta.

Ky., Louisville.—Inter-Southern Life Insurance Co. awarded contract to Selden-Breck Construction Co., St. Louis, to erect bank and office building at 5th and Jefferson Sts.; 18 stories; lower floor for bank; upper floors for more than 400 offices; cost about \$750,000; plans by Brinton B. Davis, Louisville, Ky. (Previously noted.)

Md., Baltimore.—American Ice Co., 300 Calvert Bldg., awarded contract to J. K. McIver, Wilson Bldg., Baltimore, to erect office building; two stories; brick; cost \$8000. (See "Miscellaneous Structures.")

Md., Baltimore.—Northern Central Rail- way, G. Latrobe, general agent, Union Station, awarded contract to M. C. Davis, 15 E. Fayette St., Baltimore, to erect office for yardmaster at Mt. Vernon yards; brick, covered with corrugated iron; cost \$700. (Recently noted as lowest bidder.)

Md., Cumberland.—Cumberland Office Sup-

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ply Co. will expend \$8500 to erect office and store building recently noted; contract awarded. (See "Stores.")

N. C., Greensboro.—Dr. C. W. Bannister awarded contract to August Carter, Norfolk, Va., for reinforced concrete work for six-story office building; 90 feet; fireproof construction; steam heat; cost \$60,000; plans by F. A. Weston, Greensboro; contracts for heating, elevator, pressed brick and terra-cotta have also been let. (Recently noted.)

Tex., Pharr.—Pharr, Kelly & Cage awarded contract to erect bank and office building; 50x30 feet; fireproof construction; electric lighting; cost \$10,000; plans by Tracey & Ota. (Recently noted.)

Va., Houston.—Bank of Halifax awarded contract to J. B. Overby, South Boston, Va., to erect bank building; one story; colonial type; cost \$3000; plans by Heard & Caldwell, Lynchburg, Va.

Va., Disputanta.—Bank of Disputanta awarded contract to W. L. Brown, Evergreen, Va., to erect bank building; brick; cost \$5000 to \$6000; John M. Williams, chairman building committee. (Recently noted.)

W. Va., Wheeling.—National Exchange Bank awarded contract to Perkins & Jackson, Wheeling, to erect two additional stories to bank building; plans by Glesey & Faris, Wheeling. (Previously noted.)

CHURCHES

Ala., Jonesboro, P. O. at Bessemer.—Jonesboro Methodist Church awarded contract to Crotwell Bros. Lumber Co. to remodel edifice.

Ala., Opelika.—St. Mary's Mission House awarded contract to Harry Bockman to erect chapel; 35x55 feet; ordinary construction; furnace; cost \$4500; plans by T. W. Smith & Co., Columbus, Ga. (Recently noted.)

Miss., Aberdeen.—Methodist Episcopal Church South, C. L. Tubb, treasurer, awarded contract to McElanahan & Terry, Aberdeen, to erect edifice previously noted; 55x120 feet; ordinary construction; brick; steam heat; electric lighting; cost \$32,000; plans by R. H. Hunt, Chattanooga, Tenn. (See "Machinery Wanted.")

Tenn., Knoxville.—St. John's English Lutheran Church, V. C. Richardson, pastor, awarded contract to Thomas & Turner, Knoxville, to erect edifice; 75x90 feet; cost \$80,000; plans by R. F. Graf & Sons, Knoxville. (Recently noted.)

Va., Berkley, Station Norfolk.—St. Thomas Protestant Episcopal Church, awarded contract to Richardson & Son, Hampton, Va., to erect edifice; cost about \$35,000. (Previously noted.)

CITY AND COUNTY

Ga., Savannah—Market.—City awarded contract at \$37,861 to Neal-Blum Company, Savannah, for improvements to market, including plumbing, electric conduits, cement, concrete and tile work, reinforced concrete and tile work; plans by J. de Bruyn Kops, Savannah. (Recently noted to receive bids.)

Mo., St. Louis—Hospital.—Board of Public Improvements awarded contract at \$18,240 to Wall Bros. for additions, repairs and alterations at City Hospital.

DWELLINGS

Ark., Little Rock.—Horace G. Mitchell awarded contract to W. Peterson, Little Rock, to erect residence; two stories; frame; cost \$5000.

D. C., Washington.—Francis D. Alexander, 182 U St. N. W., awarded contract to Cooper C. Lightfoot, Washington, to erect number of dwellings at Connecticut Ave. and Kanawha St., Chevy Chase Circle; nine rooms; tiled baths; colonial stairways; porches.

D. C., Washington.—Mrs. Alice Copley Thaw awarded contract to Page Construction Co., Hibbs Bldg., Washington, to remodel residence at 1801 F St. N. W. and stable in rear for garage and servants' quarters and laundry; ordinary construction; cost \$12,000; plans by J. H. de Sibley, Hibbs Bldg., Washington.

D. C., Washington.—B. E. Carr awarded contract to J. W. Powell, 1115 5th St. N. E., Washington, to erect dwelling at 735 Allison St. N. W.; cost \$4000; plans by T. O. Couvill, Washington.

D. C., Washington.—Hugh Wallace awarded contract to Page Construction Co., Hibbs Bldg., Washington, to remodel residence at 1600 Massachusetts Ave. N. W.; cost \$7000; plans by J. H. de Sibley, Hibbs Bldg., Washington.

Fla., Seabreeze.—J. B. Uebelhoer awarded contract to D. F. Fuquay, Seabreeze, to erect addition to residence; will extend front 20x48 feet on first and second floors, etc.

Ga., Savannah.—N. J. Gillespie has plans by and awarded contract to Collin Bros. Co., Savannah, to erect dwelling; 70x60 feet; mill construction; hot-air heat; cost \$8000. (Recently noted.)

Md., Baltimore.—Charles W. Hurst, 263 Calvert Bldg., awarded contract to J. K. McIver, Wilson Bldg., Baltimore, to remodel Brooks mansion on Reisterstown Rd. and Park Heights Ave.; cost about \$5000.

Md., Baltimore.—D. R. McNeill, 1225 Madison Ave., Baltimore, Md., awarded contract to Roland Park Co., 408 Roland Ave., Roland Park, to erect cottage; two and a half stories; slate roof; concrete foundation; electric lights; hot-water heat; cost \$15,000; plans by E. L. Palmer, 408 Roland Ave., Roland Park.

Md., Cumberland.—Harry L. Smith, City Commissioner of Water-works, awarded contract to erect residence.

Md., Roland Park.—P. Harris awarded contract to Roland Park Co., 408 Roland Ave., Roland Park, to erect cottage; two and a half stories; slate roof; concrete foundation; electric lights; hot-water heat; cost \$15,000; plans by E. L. Palmer, 408 Roland Ave., Roland Park.

N. C., Salisbury.—First Presbyterian Church awarded contract to D. K. Cecil, Lexington, N. C., to erect three residences; cost about \$15,000.

N. C., Winston-Salem.—George T. Brown awarded contract to G. E. Miller, Winston-Salem, to erect three two-story residences; eight rooms each; frame; electric lighting; cost \$5000.

Tenn., Nashville.—Mrs. Ellen C. Milan has let all contracts to erect dwelling; 10 rooms and attic; hot-air heat; gas and electric lighting; cost \$6000; plans by R. E. Turville. (Recently noted.)

Tex., Floresville.—R. L. Stevens awarded contract to Ben Lillie, Floresville, to erect residence. (Recently noted.)

Tex., Lockhart.—J. Stanley Smith awarded contract to Morgan Sweenegeen, Lockhart, to erect residence. (Recently noted.)

Tex., Pearsall.—W. B. Cowley awarded contract to erect residence.

Va., Berkley, Station Norfolk.—William Griffin awarded contract to F. M. Henly, Norfolk, to erect residence; two stories; frame; cost \$3000; construction begun.

Va., Petersburg.—E. A. Wyatt will erect residence; frame; cost \$3000; awarded contract to Laffoon & Gibson, Petersburg, for construction.

GOVERNMENT AND STATE

Ark., Hamburg—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract to T. W. Whitlow, Hamburg, to erect and equip postoffice building at Main and Lincoln Sts.

Md., Baltimore—Sub-postoffice.—Treasury Department, James Knox Taylor, Supervising Architect, Washington, D. C., awarded contract to W. S. P. Shields, Philadelphia, Pa., to erect sub-station postoffice at Washington and Oliver Sts.; two stories; brick; stone trimmings; slate roof; concrete foundation.

N. C., Montrose, P. O. at Timberlake.—Executive Board of State Tuberculosis Hospital, Dr. J. E. Brooks, superintendent, awarded contract to erect additional infirmary building; capacity for 50 patients. (Previously noted.)

W. Va., Wheeling—Lockkeeper's House.—United States Engineer awarded contract to Dayton & Francis, New Martinsville, W. Va., to erect locktender's house at Dam No. 15; F. W. Alstaetter, Major, Engineer. (Previously noted.)

W. Va., Wheeling—Lockkeepers' Houses.—United States Engineer Department opened bids to erect lockkeepers' houses on Dam 15; Doyle & Francis, New Martinsville, W. Va., are lowest bidders. (Recently noted.)

HOTELS

Fla., Leesburg.—Mr. McCormack, proprietor of Magnolia Hotel, awarded contract to C. J. Phillips, Leesburg, to remodel and enlarge hotel; will add 10 to 12 sleeping rooms, install electric lights, etc.

Ga., Augusta.—M. W. Partridge awarded contract to William Miller, Augusta, to erect addition to hotel; 114x72 feet; mill construction; stucco; steam heat; electric lighting; cost \$20,000; plans by Druckenmiller, Stackhouse & Williams, Philadelphia, Pa. (Recently noted.)

La., Shreveport.—Peter Youree is having plans prepared by George R. Mann, Little Rock, Ark., for proposed Youree Hotel; eight

stories; 225 rooms; cost about \$300,000. (Noted in April.)

W. Va., Martinsburg.—Joseph Artz, Martinsburg, has contract for improvements to Colonial Hotel, including removing partition between dining-room and kitchen, erection of frame addition, removing kitchen to frame structure in rear connected with main building by closed passageway; improvements begun.

MISCELLANEOUS

Fla., Oma—Exchange.—Citrus Exchange awarded contract to Hiers & Folsom Contracting Co., Wauchula, Fla., to erect building; 50x30 feet; one story; frame; corrugated galvanized roofing.

Ga., Macon—Railway Shed.—Southern Railway Co., B. Herman, chief engineer, 1300 Pennsylvania Ave., Washington, D. C., and Georgia Southern & Florida Railway Co. awarded contract to C. W. Lane & Co., Candler Annex Bldg., Atlanta, to erect freight-receiving shed; one story; 49x30 feet; reinforced concrete construction; cost \$32,000; sub-contract for reinforced concrete work let to Industrial Engineering Co., Atlanta, Ga., and New York. (Previously noted under "Railway Shops, Terminals, Roundhouses, etc.")

Md., Baltimore—Restaurant.—George W. Hyde, 225 E. Baltimore St., awarded contract to B. F. Bennett Building Co., 123 S. Howard St., Baltimore, to erect restaurant at 322-34 N. Howard St.; three stories; pressed brick and stone; beveled plate glass; marble fixtures; plans by C. M. Anderson, 324 N. Charles St., Baltimore. (Recently noted.)

Md., Baltimore—Stable.—American Ice Co., 209 Calvert Bldg., awarded contract to J. K. McIver, Wilson Bldg., Baltimore, to erect proposed stable at Franklin and Smallwood Sts.; 61x22 feet; two stories; fireproof construction; cost about \$20,000; also awarded contract to same contractor to erect office building; 40x45 feet; two stories; brick; cost about \$8000.

Md., Baltimore—Stable.—Enterprise Fuel Co., Hanover & Fayette Sts., awarded contract to Louis C. Wood to erect stable and storage building at Oak and 21st Sts.; 29x104 feet; two stories; brick; composition roofing; concrete foundation; plans by M. A. Long, 6 Elmhurst Rd., Roland Park, Md.

S. C., Columbia—Fair Building.—South Carolina State Fair Association will expend \$55,000 to erect fair building; 300x400 feet; fireproof construction; contract recently noted awarded to Mark Taylor, 1910 Assembly St., Columbia.

Tenn., Knoxville—Cafe.—Fouche Estate awarded contract at \$3700 to David Getaz, Knoxville, to remodel building at Gay St. and Clinch Ave.; plans by L. C. Waters, Knoxville.

Va., Catawba—Sanatorium Pavilion.—Catawba Relief Association awarded contract to G. S. Morgan, Catawba, to erect sleeping and living quarters for tubercular patients; ordinary construction; steam heat; cost \$4000; plans by Cary Shepherd, Richmond, Va. (Recently noted.)

RAILWAY STATIONS

Va., Altavista—Virginia Railway Co., H. H. Fernstrom, chief engineer, Norfolk, Va., awarded contract to W. B. English, Altavista, to rebuild passenger and freight station; 30x134 feet; ordinary construction; stoves; electric lighting; cost \$4000. (Recently noted.)

N. C., Wendell.—Norfolk Southern Railroad, L. Nicholson, chief engineer, Norfolk, Va., awarded contract to C. V. York, Raleigh, N. C., to erect freight and passenger station; ordinary construction; 24x112 feet; cost \$2350. (Recently noted.)

SCHOOLS

Ala., Monroeville—City awarded contract to W. E. Ward, Pineapple, Ala., to erect proposed high-school building; brick and concrete; two stories; five rooms and auditorium 50x60 feet; seating capacity 600; cost about \$10,000.

Fla., Bocagrande.—School Board awarded contract to Hiers & Folsom Contracting Co., Wauchula, Fla., to erect high school; 40x50 feet; two stories; frame; shingle roof.

Ky., Lexington.—Board of Education awarded contract to Combe Lumber Co., Lexington, to erect school in Jack's Creek district. (Recently noted.)

La., Saline.—City awarded contract to Mr. Hines to erect proposed school.

Mo., Kansas City.—Board of Education awarded contract at \$33,750 to Flanagan Bros. Manufacturing Co., Kansas City, to erect addition to Yeager school, and at \$3470 to

L. Crosby & Son, Kansas City, for improvements to yard at Morse school.

Mo., Kansas City.—School Board awarded contract to L. Crosby & Son, 517 Massachusetts Bldg., Kansas City, to erect school building; 12 rooms; fireproof construction; brick and reinforced concrete; fan system of heating; cost \$64,125; plans by Charles A. Smith, 902 Finance Bldg., Kansas City. (Recently noted.)

Okla., Stillwater.—State Board of Agriculture awarded contract to O'Keefe Construction Co., Oklahoma City, Okla., to erect chapel and library building and engineering building. (Recently noted.)

S. C., Camden.—Mather Academy building (contract recently noted awarded to A. R. Lazebny) will be of frame with brick basement; size 62x104 feet; cost within \$20,000; steam heat; electric lighting; plans by C. H. McClure, Cambridge, Mass.

N. C., South Mills.—South Mills School District Trustees awarded contract to erect school; two stories; brick; cost \$10,000.

Tex., Belton.—Wiltonville School District awarded contract to Hemp Birdwell, Belton, to erect Rock Quarry School.

Tex., Cleburne.—St. Joseph's Academy awarded contract to A. Fussel, San Antonio, Tex., to erect brick building; cost \$10,000.

W. Va., Morgantown.—Board of Education awarded contract to Smith Construction Co., Morgantown, to erect proposed school building; eight rooms; fireproof construction; cost \$20,000; plans by C. V. Bates, Wheeling, W. Va.

STORES

Ark., Hamburg.—T. W. Whitlow awarded contract to erect two business buildings.

Fla., Jacksonville.—E. M. L'Engle awarded contract to National Fireproofing Co., Pittsburgh, Pa., to erect building; stores and apartments; 128x106 feet; cost \$63,000; steam heat; electric lighting and power; freight elevator; plans by J. H. Welsh, Jacksonville, Fla.; construction begun. (Recently noted.)

Fla., Plant City.—S. E. Mays awarded contract to erect business building; brick.

Md., Cumberland.—Cumberland Office Supply Co. will expend \$8500 to erect store and office building; 18x60 feet; fireproof construction; hot-water heat; plans by George F. Sansbury, Cumberland; contract recently noted awarded to James C. Powell, Cumberland; all subcontracts let.

N. C., High Point.—Union Furniture Co. awarded contract to Jackson & Montgomery, High Point, to erect business building; brick construction; five stores on lower floor; cost \$10,000.

N. C., High Point.—A. Sherrod awarded contract to Jackson & Montgomery, High Point, to erect store and apartment building; two stories; 80x70 feet; ordinary construction; cost \$10,000.

Tenn., Gleason.—Ammons & Bynum awarded contract to erect store and theater building recently noted. (See "Theaters.")

Tex., Marlin.—Finley & Co. awarded contract to erect store building; 30x90 feet; brick; electric lighting; cost \$5000. (Recently noted.)

Va., Alexandria.—D. Bendheim & Son awarded contract to M. F. Piper, Washington, D. C., to erect building at 417-19 King St.; three stories.

W. Va., Elm Grove.—Ed. L. Kiger awarded contract to J. M. Butler to erect store building; frame construction.

THEATERS

Fla., Brooksville.—Robert Bracey awarded contract to L. B. Yarn and L. S. Pettaway, Brooksville, to erect opera-house; raised floor, etc.

Ga., Rome.—Interstate Amusement Co., William De Lay, president, awarded contract to Wilkin & Johnson to remodel building as moving-picture theater. (Recently noted incorporated under "Miscellaneous Enterprises")

Tenn., Glensboro.—Ammons & Bynum awarded contract to J. C. Smythe, Glensboro, to erect theater and store building; 40x75 feet; two stores on ground floor; mill construction; steam heat; lighting not determined; cost \$6000; plans by H. H. Kemple, Martin, Tex. (Recently noted.)

WAREHOUSES

Okla., Tulsa.—Binding Stevens Grain Co.'s warehouse and elevator building (recently noted) will be 36x52x65 feet; contract awarded to Morley Bros., Haden & Plott, Wichita, Kans. (See "Miscellaneous Enterprises.")

Va., Richmond.—Watkins-Cottrell Company awarded contract to J. T. Nichols, 110 E.

Main St., Richmond, to erect warehouse; 100x135 feet; three stories; mill construction; steam heat; two elevators; cost \$45,000; plans by Carnal & Johnson, National Bank of Virginia Bldg., Richmond. (Recently noted.) Va., Richmond.—Watkins-Cottrell Hard-

ware Co. awarded contract to J. T. Nuckles, Richmond, to erect warehouse at 14th and Dock Sts.; three stories; 95,000 square feet floor space; cost about \$145,000; plans by Carnal & Johnson, 409 National Bank of Virginia Bldg., Richmond. (Recently noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Eufaula.—The Eufaula & Chattahoochee Railroad Co., recently organized with J. P. Foy of Eufaula president and capital of \$100,000, has, according to a dispatch from Montgomery, filed incorporation papers. A line from Pittsview to Eufaula is to be built as soon as possible. (See Manufacturers Record, September 21.)

Ala., Mobile.—The Manufacturers Record is informed that George H. Clark will be chief engineer for the Mobile West Shore Traction Co., which proposes to build a line from Mobile to Scranton, Miss.; headquarters, Bank of Mobile Building.

Ala., Mobile.—C. V. Shoub, one of the organizers of the Mobile Interurban Motor Railway Co., which is to build a line about two miles long from Mobile to Pinehurst, says that it is intended to complete the road ready for operation within six months. Address Box 417, Wetville, O.

Ala., Tuscaloosa.—The Kaul Lumber Co. of Birmingham, says it contemplates construction of 20 or 25 miles of railroad from the site of its proposed sawmill at Tuscaloosa to timber lands. About 220,000 cubic yards of excavation will have to be done in addition to about 65,000 cubic yards at and around the mill site. John L. Kaul is president and treasurer and B. P. Head is secretary.

Ala., Union Springs.—W. A. Garrett of Montgomery, Ala., is reported appointed chief engineer of the Birmingham & Southeastern Railroad, of which W. M. Blount of Union Springs is president. He will make survey from Millstead northward and from Union Springs southward. Grade is about done from Fort Davis to Millstead. President Blount is quoted saying there is no doubt the line will be built from Birmingham to St. Andrews Bay.

Ark., Dardanelle.—The Dardanelle, Ola & Southern Railroad Co. is reported rechartered as the Rock Island & Dardanelle Railroad Co., and the Chicago, Rock Island & Pacific Railway is believed to be interested, as improvements and extensions are reported in contemplation. J. B. Berry, chief engineer of the Rock Island system at Chicago, may give information.

Ark., Portland.—C. O. Byrd of St. Louis, representing A. R. Byrd & Sons of that city, is reported arranging for the construction of an extension of the Portland & Southeastern Railway to a connection with the Vicksburg, Shreveport & Pacific Railroad. J. H. Byrd of St. Louis is president of the road.

Ga., Eastman.—Business men are reported organized to build a railroad from Eastman to Barrows Bluff; Wm. Clemens, president, and Hal Roberts, secretary.

Ga., Gainesville.—A dispatch says that papers have been signed for the extension of the Gainesville Midland Railroad via Concord and Cleveland to Robertstown. The extension will be called the Gainesville & Northwestern. G. J. Baldwin is president of the Gainesville Midland at Savannah, Ga.

Ga., Thomasville.—J. C. Vaughn, Thomasville, says he has contract to grade three miles of tracks for the Atlantic Coast Line, requiring handling of 20,000 cubic yards of material. Work began September 25; to be done by January.

Ky., Henderson.—W. A. Carson, general manager of the Evansville Railways Co., confirms report that the Illinois Central tracks have been leased between Evansville and Henderson, about 10 miles, crossing the Ohio River by ferry, and they will be electrified, work to start in about 60 days.

Ky., Wasloto.—The Wasloto & Black Mountain Railroad, T. J. Asher, president, at Wasloto, Ky. (Louisville & Nashville system), will, it is reported, build an extension from Harlan along Clover Fork to Ages Creek, and perhaps finally to Appalachia, Va., about 40 miles.

Ky., Winchester.—J. E. Willoughby, engineer of construction of the Louisville & Nashville Railroad, denies recent report that the Lexington & Eastern Railroad might be extended from Paris to Indian Fields.

La., Genesee.—The Houltonville extension of the Genesee & Eastern Railroad is reported complete and will be immediately operated. The company has 32 miles of lines.

The Genesee Lumber Co. and the Houltonville Lumber Co. are reported interested.

Miss., Laurel.—P. H. Saunders of Laurel, vice-president of the Gulf States Investment Co., is reported interested in plans to build an interurban railway from Laurel to Hattiesburg, Miss., about 25 miles.

Miss., Jackson.—Joel F. Johnson of Jackson, Miss., and Andrew M. Sweeny and P. H. Fitzgerald of Indianapolis, Ind., says a dispatch, have promoted the Johnson-Fitzgerald-Sweeny Lumber Co. of Jackson, capital \$5,000,000, which has applied for charter to develop timber lands and build railways in connection therewith in the Pearl River Valley.

Miss., Meridian.—Gentlemen interested in the proposed Memphis & Pensacola Railroad, which is to run from Pensacola, Fla., via Meridian, Miss., to Helena, Ark., and Memphis, Tenn., several hundred miles, are reported saying that practically all right of way is secured, grade done for about 50 miles out of Grenada, Miss., and arrangements made for financing. Franchises are asked at Meridian. Among those interested, according to a dispatch, are Chester H. Pond of Moorehead, Miss.; W. P. Dickinson of Chicago, B. C. Plumb of London, T. H. Jones of St. Louis and George Zouille of Chicago. A later report says the line will be 174 miles from Pensacola to Meridian, 206 miles from Meridian to Memphis and 106 miles from Memphis to Helena. C. D. Smith Co. of Memphis are said to have the contract.

Mo., Jefferson City.—C. Porter Johnson of St. Louis is quoted saying that P. M. Johnson of St. Louis and M. G. Quinn of Chicago are interested in forming a new company, which will apply for charter in a few days, to build the contemplated electric interurban railway from Jefferson City to Columbia and Mexico, Mo.

Mo., Kansas City.—Reported that McMurtry & Griffith have sublet work on the electric line from Kansas City to St. Joseph to contractors as follows: Fitzgerald Bros., F. C. Roberts, Frank Burke, Wood, Bancroft & Doty, T. L. Campbell, M. R. Humbert, Russell & Condon and Olson & Rush.

Mo., Springfield.—The Missouri Pacific Railway, it is reported, contemplates building a branch to Springfield. E. F. Mitchell is engineer of construction at St. Louis.

N. C., Burlington.—The Piedmont Railway & Electric Co., it is reported, will immediately put in service its new interurban line from Burlington to Graham and Haw River, 8½ miles. George W. Hatch of Burlington is general superintendent. H. D. Elchelberger, Warner Moore, C. Boise and J. R. Paschal, all of Richmond, Va., are interested; capital \$1,000,000.

N. C., Durham.—The Durham & South Carolina Railroad is reported to have let contract to John T. McKinney of Lynchburg, Va., to build an extension from Bonsal, its present terminus on the Seaboard Air Line, to Rawls to connect with the Raleigh & Southport, about 12 or 13 miles. R. A. Honeycutt is general superintendent and chief engineer at Durham.

N. C., Greensboro.—Charles G. Benbow of Greensboro is reported saying that steps are being taken to build the proposed railroad from Winston-Salem via Greensboro to Norfolk, Va., under a charter obtained last winter. Other points to be connected will be Burlington, Graham, Roxboro, Henderson and Wilson, N. C.

N. C., Raleigh.—A report from Greensboro, N. C., says that the holders of the franchise for the Raleigh, Charlotte & Southern Railroad Co. have ratified the transfer to E. C. Duncan of Raleigh, who is to build the line. Estimated cost, about \$8,000,000. Line will be about 144 miles long, from Raleigh to Charlotte via Pittsboro, Asheboro and Albemarle, with branches to Greensboro and Durham.

N. C., Spray.—The North Carolina-Virginia Railroad from Spray to Ridgeway, Va., is reported graded and the ties ready for the rails. It is expected to be completed within two months. Bids are being received for tracklaying. J. D. Huffines of Spray and others are interested.

Okla., Taloga.—The Taloga, Putnam & Southern Railroad Co. has been chartered with \$100,000 capital to build a line about 150

miles long, extending from Chickasha to Woodward, Okla., and traversing Caddo, Washita, Custer and Dewey counties; incorporators, Chas. W. Musgrave, George W. Kouns, J. E. Rudle, I. M. Willey, S. H. Whittenberg, George Sowers, Nett Stidham and F. M. Darby, all of Taloga; C. S. Dunn, Frank Widdel, Perry Skelton, Chas. Miller and W. M. Phelps, all of Putnam, Okla.

S. C., Anderson.—M. N. Patterson, who, according to a dispatch, has interested Northern capital to build an electric railway from Easley via Anderson to Abbeville, S. C., about 60 miles, expects to organize a company immediately, it is further stated.

S. C., Rock Hill.—The Carolina Traction Co., which has just filed its charter, is reported granted franchise to extend its operations into Chester county, in addition to building lines around Rock Hill; incorporators, J. M. Cherry of Rock Hill, S. C., and W. S. Lee and George Stevens of Charlotte, N. C.

S. C., Sumter.—The Atlantic Coast Line, says a dispatch, has begun engineering work for an enlargement of its freight yards at Sumter. E. B. Pleasants is chief engineer at Wilmington, N. C.

Tenn., Nashville.—Concerning the report that the Nashville, Chattanooga & St. Louis Railway would build a double-track tunnel at Cowan and reduce grade from Normandy to Tullahoma, it can be stated on authority that survey was made for double track from Cowan to Sherwood two years ago, but nothing was done; also that investigations are being made to secure a low-grade route between Normandy and Tullahoma. Hunter McDonald, Nashville, Tenn., is chief engineer.

Tex., Crystal City.—J. E. Franklin of St. Louis, president of the Crystal City & Uvalde Railroad, which has just completed an extension to Fowlerton, about 28 miles, is reported saying that an extension will be built to Aransas Pass, provided bonuses equal to \$700 per mile are subscribed.

Tex., Fort Worth.—The Texas Building Co., having the contract for construction of the Fort Worth & Cleburne Interurban Railway, will, it is reported, build three miles out of Fort Worth with its own forces, and has subtlet the rest, among the contractors being Martin Connolly, Wm. R. Petty, H. B. Ashburn, T. M. Brown and Patrick Madden.

Tex., Kingsville.—The St. Louis, Brownsville & Mexico Railway, according to a dispatch, may begin work before long on the construction of a line from Kingsville to Alice, Tex., about 25 miles. This would connect with the San Antonio & Aransas Pass Railroad and make a direct route from Kingsville to San Antonio. E. C. Burgess is engineer of construction at Kingsville, Tex.

Tex., Linden.—A letter to the Manufacturers Record says it is learned that the Jefferson & Northwestern Railway will operate a five-mile extension into Linden within a few days. It was reported last spring that the company would build this line, but no official announcement thereof was made. A. D. Clark, Dallas, Tex., is president.

Tex., Mission.—Sam Robertson of San Benito, Tex., president of the San Benito Interurban Railway, says a dispatch, has contracted to build a line from Mission to Monte Cristo, 15 miles.

Tex., Palacios.—The Palacios, San Antonio & Pecos Valley Railroad, according to a dispatch, has made preliminary surveys and located line from Palacios via Edna to Yonkum, Tex., right of way and bonuses have been secured to Edna, and it is expected construction will begin in 60 days. John P. Pierce is president; S. T. Best, first vice-president; Thomas H. Bonner, second vice-president, and W. H. Brooks, secretary and treasurer.

Tex., Victoria.—A dispatch says that J. H. Elliott, vice-president and general manager, and F. G. Jonah, chief engineer of construction of the Frisco system, accompanied by A. T. Perkins, first vice-president of the St. Louis, Brownsville & Mexico Railroad, have investigated with a view to building a line from Bloomington to Victoria, about 13 miles; headquarters at St. Louis, Mo. Right of way, terminal facilities and a bonus of \$14,000 are asked.

W. Va., Wire Bridge.—The Steer Creek Railroad Co. of Wire Bridge has been chartered to build a line from Wire Bridge to Grantsville, about 25 miles; capital \$10,000; incorporators, Cecil Gross of Elkins, G. W. Van Horn of Wire Bridge, E. Bryan Templeman, Charles E. Peddeord and Osman E. Swartz of Clarksburg, W. Va.

STREET RAILWAYS

Ga., Waycross.—The Waycross Street & Suburban Railway Co., says a dispatch, has organized; capital, \$300,000 to \$500,000. Proposed lines: Waycross to Blackshear and Waresboro. George W. Deen is president, T. H. Calhoun vice-president, J. L. Sweat second vice-president, H. H. Burnet secretary, and L. J. Cooper treasurer. Expected work will begin soon. Directors include the officers and John T. Myers, W. W. Lambdin, Leon A. Wilson, W. T. Brinson and H. D. Watt.

Tenn., Knoxville.—The Knoxville Railway & Light Co., says a report from Knoxville, has been granted a franchise to build an extension of one mile out the Sevierville turnpike to the New Island Home park suburb.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressor.—Charles L. Eskridge, Shelby, N. C., wants prices on air compressor.

Ammoniums.—See "Fertilizer Materials, etc."

Bakery Equipment.—P. H. Kleber & Sons, Dallas, Tex., want prices on flour blending and sifting machinery, flour hoist, elevator and bake ovens.

Boiler.—Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond, Va., wants prices on boiler.

Boiler.—See "Holsting Engine and Boiler."

Bottling Machinery.—Henry Hell, Mercedes, Tex., wants prices on machinery for small bottling plant.

Brick Machinery.—H. L. Fitch, Brownsville, Tex., wants prices on new and second-hand pressed-brick machinery. Give full description.

Brick and Tile Machinery.—See "Machinery."

Bridge Construction.—See "Paving."

Bridge Construction.—Commissioners' Court, Brazos county, receives sealed bids until noon November 1 (extended date) at office of J. W. Munson, County Judge, Angleton, Tex., for furnishing material and labor for construction of two bridges over Brazos River at Columbia and at Brazoria in accordance with plans and specifications on file at office of County Judge; bids to be opened on same date; contractors to submit bids for each bridge separately and for both together; certified check for \$3000; contractors requested to visit locations; duplicate plans, etc., may be secured from F. S. Rice, engineer, Sweeney, Tex.; rights reserved.

Bridge Construction.—Wise County Supervisors, Wise, Va., will receive bids until 11 A. M. October 31 for construction of truss bridge, 87-foot span with trestle approach; four truss bridges, 54-foot span; three truss bridges, 54-foot span; six truss bridges, 50-foot span; five I-beam bridges, 40-foot I-beam; six I-beam bridges, 30-foot I-beam; no approaches; information and plans may be obtained from P. St. J. Wilson, State Highway Commissioner, or County Engineer, Norton, Va.

Building Hardware.—See "Door Hangers and Track."

Building Materials, etc.—G. W. Stiles Construction Co., 721 Rookery Bldg., Chicago, Ill., wants bids on all lines of material needed to erect postoffice building at Florence, Ala. (proposals to be opened October 31); three-story fireproof building, with stucco facings and stone trimmings; about 6000 feet ground area.

Building Materials, etc.—D. H. Atta-

way, Greenville, S. C., wants prices on building material, including brick, elevator, fire-proof blinds, anchor irons, etc.

Cane Cultivation and Products.—See "Hay and Cane Cultivation."

Canal Construction.—Commissioners Sixth Ward and Crowley Drainage District, H. E. Lewis, president, Crowley, La., will receive bids until noon October 28 for construction of about 40 miles open ditches ranging from two to six miles in length, 16 to 40 feet in width and two to five feet in depth; about 600,000 cubic yards excavation; about 90 acres of clearing; no rock; mostly open prairie; three lines of railway; certified check \$1000; W. S. White, engineer.

Canning and Packing Equipment.—See "Machinery."

Car Bodies.—Fidelity Securities Corporation, Stahlman Bldg., Nashville, Tenn., will want (within four months) four interurban single-end-operation passenger-car bodies and one baggage-car body, double-end operation; is interested in steel-body construction, if not too heavy; total length over all, 50 feet.

Cars.—Harry Ellis, Jr., 1138 Mutual Bldg., Richmond, Va., wants four dump cars; second-hand preferred.

Cars.—See "Traction Engine, etc."

Cars.—See "Logging Equipment."

Cars.—Arapahoe-Barick Creek Tramway Co., J. M. Reel, manager, Arapahoe, N. C., wants light hand cars for narrow-gauge rail-road.

Carbonating Machinery.—See "Miscellaneous Machinery."

Cast-iron Pipe, Fittings, etc.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 6, and then opened, for furnishing cast-iron pipe and fittings, gate valves, oakum, rubber boots, lumber and untreated piles. Blanks and information relating to this circular (No. 653) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1080 North Point St., San Francisco; also from U. S. Engineers' offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Cinematographs.—See "Phonographs, etc."

Cigarette Machinery.—See "Miscellaneous Machinery."

Copper.—See "Roofing Materials."

Cranes.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants two (and probably four) second-hand standard-gauge locomotive cranes, capacity five tons at 50-foot radius, A-1 shape, immediate delivery.

Cross-arm Machinery, etc.—J. E. Hel-lams, 325 S. Ann St., Mobile, Ala., wants new or second-hand machinery for cross-arm factory; also wants to correspond with dealers in cross-arms.

Crusher and Rolls.—Harry Ellis, Jr., 1138 Mutual Bldg., Richmond, Va., wants crusher for quartz and slate, capacity 10 tons per hour; also set of rolls to handle output of crusher to 60 mesh.

Clothes Hangers.—See "Store Fixtures, etc."

Collins and Caskets.—See "Furniture, etc."

Desks.—J. S. Adams, Mayor, Demorest, Ga., wants catalogues and prices on desks for six to eight-room school building.

Distilling Machinery.—Henry Hell, Mercedes, Tex., wants prices on distilling machinery for distilling water for ice.

Door Hangers and Track.—Frank L. Smith, chairman of building committee, Lexington, Ky., wants prices on track and hangers for six sets of accordian doors for church building.

Drilling and Drilling Machinery.—J. H. Stinson, Grundy, Va., wants to correspond with contractors furnishing equipment and labor for drilling for coal with diamond or core drill, or those supplying machinery only.

Drugs, etc.—C. David Ricciare & Co., Pasto, Narino, Columbia, S. A., want catalogues and prices on artificial fire, postal cards, drugs, etc.; view to purchases or acceptance of sole agencies.

Electric-light Plant.—See "Water-works."

Electrical Machinery.—See "Miscellaneous Machinery."

Electrical Machinery.—E. E. Wohlett, Littleton, N. C., wants small second-hand generator and switchboard for 40-light plant in planing mill.

Electrical Machinery.—See "Machinery."

Electric Motor.—Charles L. Eskridge, Shelby, N. C., wants prices on second-hand one-horse-power single-phase 110-volt motor.

Electric Whistles.—Inverness Mills Co., Winston-Salem, N. C., wants to correspond with manufacturers of or dealers in electric horns or whistles for factory.

Elevator.—See "Building Materials, etc."

Elevator.—See "Bakery Equipment."

Engines.—Florentino C. Pogliano, San Pedro 76-Flores, Buenos Aires, Argentine Republic, South America, wants to correspond with manufacturers of steam and oil engines; view to representation.

Engine.—Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond, Va., wants prices on engine.

Engine.—Miller Supply Co., Huntington, W. Va., wants prices on second-hand 300-horse-power right-hand Corliss rope-drive engine.

Engineers.—See "Water-works."

Excavation Work.—See "Sawmill Plant."

Farming Implements.—See "Hay and Cane Cultivation."

Felt.—See "Roofing Materials."

Fertilizer Materials, etc.—Farmers' Storage & Fertilizer Co., Aiken, S. C., wants fertilizer materials, especially ammonium; also wants printing machine for fertilizer sacks.

Filing Cabinets.—J. Harrison Yates, Herndon, Va., wants catalogues and prices on filing cabinets.

Fire Hose.—Geo. Erichson, Bokchito, Okla., will want fire hose about January 1.

Fireproof Blinds.—See "Building Materials, etc."

Flower-pots.—Frederick O. Tyler, manager American Tea Growing Co., Rantowles, S. C., wants addresses of manufacturers of pots and tubs for plants.

Furniture.—See "Metal Furniture."

Furniture, etc.—New York Home Furnishing Co., Mullen, W. Va., wants dealer's prices and terms on furniture, household goods of all kinds, coffins and caskets.

Gas Engine, etc.—Treasury Department, office of James Knox Taylor, Supervising Architect, Washington, D. C. Sealed proposals received in this office until 3 P. M. October 25, and then opened, for gas engine and electric generator, etc., in United States postoffice at London, Ky., in accordance with specification, copies of which may be had at this office at discretion of supervising architect.

Gas Plant.—J. B. Flora, Mayor, Elizabeth City, N. C., will hear proposals at 7:30 P. M. November 9 from all who wish to install gas plant.

Gas-plant Machinery.—See "Machinery."

Gasoline Engine.—M. M. Reeves, Eu-faula, Ala., will want prices on 20-horse-power gasoline engine to operate feed mixer.

Gasoline Motors.—See "Locomotives, etc."

Gasoline Engines.—N. B. Stone, care of Southern Poultry Supply Co., 824 9th St. N. W., Washington, D. C., wants addresses of manufacturers of small gasoline engines.

Gate Valves.—See "Cast-Iron Pipe Fittings, etc."

Grading.—Duval County Commissioners, Jacksonville, Fla., will receive bids until 10 A. M. October 20 for clearing, grubbing and grading Chassell Rd. from Atlantic Blvd. to Chassell, as per specifications on file with Gall L. Barnard, County Engineer; certified check for \$150, payable to C. W. Ellis, chairman County Commissioners; specifications and other data will be furnished by County Engineer.

Hammer.—P. J. Barringer, Box 1027, Bartlesville, Okla., wants second-hand guaranteed steam hammer, 1100 to 1500-pound striking blow. Give price, dimensions, etc., first letter.

Hardware.—See "Roofing Materials."

Hay and Cane Cultivation.—O. P. McPherson, Gloster, Miss., wants information on cultivation of hay, and implements

for cultivating, including presses, mowing machine, etc.; information and prices on diversified farming implements, including harrows and plows; also data on cane cultivation, machinery for handling, grinding, etc.

Heating Plant.—Methodist Episcopal Church South, C. L. Tubb, treasurer, Aberdeen, Miss., wants prices on steam-heating plant for \$32,000 church.

Hoisting Engine and Boiler.—Demarke & MacCammon, Arkansas City, Ark., want hoisting engine and boiler, mounted, D. D., D. C., about 9x10.

Hoisting Machinery.—See "Bakery Equipment."

Hoisting Machinery.—Hollingsworth Wheel Co., Hagerstown, Md., wants second-hand or rebuilt double-cylinder single-friction drum steam-hoisting winch to operate derrick for loading logs.

Household Goods.—See "Furniture, etc."

Ice and Cold-storage Machinery.—S. A. Matz, Hotel Matz, Bluefield, W. Va., wants information on ice or cold-storage machinery to be operated without water over condenser.

Ice and Cold-storage Plants.—Virginia Fruit Growers, C. M. Moonaw, general manager, Staunton, Va., wants information and estimates (covering cost of erection) on cold-storage plants; capacities 25,000, 30,000, 40,000 and 50,000 barrels of apples; wants prices on storage plants, both with and without commercial ice plants.

Ice-cream Machinery.—Henry Hell, Mercedes, Tex., will want prices on ice-cream machinery.

Ice Machinery.—See "Machinery."

Ice Machinery.—Henry Hell, Mercedes, Tex., wants prices on five-ton ice machine.

Ice Plant.—Sam M. Winters, Box 46, Hagerman, New Mexico, wants estimates on complete new ice machine plant, 25 to 75 tons capacity, to be located in Southwest.

Lathe.—Luther A. Youngs, Paradis, Ia., wants prices on second-hand screw-cutting lathe, 14-inch swing by 6-foot bed.

Levee Construction.—Levee District No. 2 of Miller county, Texarkana, Ark., will receive auction bids until 1 P. M. November 11 for construction of about 2,000,000 cubic yards levees, together with certain drainage ditches; if contractor desires to send sealed bid, bid will remain unopened in view of all bidders until open bidding is concluded; bids will be received for work as whole or for any section thereof; certified check 5 per cent. of bid; Morgan Engineering Co., engineer, Goodwin Institute, Memphis, Tenn.

Lighting.—Methodist Episcopal Church South, C. L. Tubb, treasurer, Aberdeen, Miss., wants prices on lighting for \$32,000 church.

Locomotives.—See "Logging Equipment."

Locomotive, etc.—Arapahoe-Barick Creek Tramway Co., J. M. Reel, manager, Arapahoe, N. C., wants small cog-gear locomotive or gasoline motor for narrow-gauge rail-road.

Logging Equipment.—Yellow Pine Lumber Co., Greensboro, N. C., wants to lease or purchase 36-inch or standard-gauge locomotive, 6 to 10 tons; three or four cars not more than 10 tons capacity; for logging, about two miles of light iron rail, not over 20 pounds.

Lumber.—See "Cast-iron Pipe, Fittings, etc."

Gasoline Engine.—Demarke & MacCammon, Arkansas City, Ark., want stationary gasoline engine, about 20 to 30 horse-power, either single or double cylinders.

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Metal-covered Window Frames, etc.—Department of Justice, Office of Superintendent of Prisons, Washington, D. C. Proposals received in this office until 10 A. M. October 30, and then opened, for metal-covered window frames and sash, door frames and doors, exterior and interior finish, etc., to be furnished for hospital building, United States penitentiary, Atlanta, Ga.; copies of specifications, together with further information, may be had upon application at this office; R. V. La Dow, Superintendent of Prisons.

Miscellaneous Machinery.—C. David Ricciare & Co., Pasto, Narino, Colombia, S. A., want catalogues, prices, etc., on electric motors and dynamos, telephones and supplies for installing arc and incandescent lights; cigarette machinery, water-carbonating machinery and equipment for manufacturing candles and soap; view to purchases or acceptances of sole agencies.

Motor Trucks.—See "Traction Engine, etc."

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 24, and opened immediately thereafter, to furnish at Navy-yard, Charleston, S. C., naval supplies as follows: Schedule 3970, furnishing and installing blacksmiths' forges; schedule 3967, cotton floor mops, linoleum, wash-deck hose, locks, hardware, etc.

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Lumber.—See "Cast-iron Pipe, Fittings, etc."

Machine Tools.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids October 31 for furnishing set pneumatic flanging clamps, boller plate radial drill, power press and rapid action punch and riveter, schedule 4005; delivery Navy-yard, Norfolk, Va.; also until October 31 for furnishing three drill presses, schedule 4003; delivery Navy-yard, Washington, D. C.; for schedules apply navy pay office nearest navy yard.

Machinery.—Dominion Stock and Bond Corporation, Ltd., Winch Bldg., Hastings St. West, Vancouver, B. C., Canada, will want prices on complete machinery equipments for following: Packing-house; confectionery and biscuits; fruit and vegetable canneries; pump mill; sawmill; paper-making and box manufactory; shoe manufactory and leathergoods; tobacco and cigars; ready-made clothing; pickles and sauces; bridle and tittle plant; creamery and cheese factory; soap and paint manufacturing plants; carpets, blankets and rugs; agricultural implements; matches; cereal and flour mills; electric plant; ice factory; gas plant; boat-building; limekiln outfit and woolen-mills machinery.

Machinery.—See "Roofing Materials."

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Heating Plant.—Methodist Episcopal Church South, C. L. Tubb, treasurer, Aberdeen, Miss., wants prices on steam-heating plant for \$32,000 church.

Metal Furniture.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 31 for furnishing 15,000 pounds of muriatic acid, schedule 4009; lot of wire rope hooks and thimbles, 153 feet 1½-inch suction hose, 750 pounds of spelter solder, 62 spruce poles, 20,630 pounds of sheet zinc, schedule 4010; 500 pounds of rubber sheet packing, schedule 4011; delivery Navy-yard, Norfolk, Va.; for

schedules apply navy pay office nearest navy yard.

Oil Engines.—See "Engines."

Pack Frame Sets.—Office of Chief Signal Officer, Capt. R. J. Burt, disbursing officer, War Department, Washington, D. C., will receive bids until 11:30 A. M. October 21 for 26 pack frame sets for portable wireless telegraph sets, complete; signal corps specifications No. 561, and drawings Nos. 839,840-1, 841, 842, 843, 844, 845.

Paving.—Sealed proposals received by Board of Commissioners of Improvement District No. 180, Little Rock, Ark., until 12 M. October 24 for grading, curbing, draining and paving with asphalt or asphaltic type approximately 38,500 square yards of pavement. Bids will be received by secretary of the district, W. C. Foster, 301 Main St., Little Rock. Proposal forms and specifications may be obtained from Ford & MacCrea, engineers in charge, 338 Gazette Bldg.; rights reserved.

Paving.—Board of Education, A. B. Hill, secretary, Memphis, Tenn., will receive bids until noon October 11 for constructing concrete walks at Central high school, South Bellevue Ave.; further information furnished by Mr. Hill, 420 Goodwyn Institute Bldg.

Paving, etc.—Speedway Land Co., J. M. Dickinson, president, 71 Madison Ave., Memphis, Tenn., will receive bids until noon October 14 for following work on property east of north Watkins Ave. from Speedway to Jackson Ave.; grading Faxon Ave. from Watkins to Stonewall St. and adjacent property; grading Stonewall St. from Speedway to Tutwiler St. and from Tutwiler to Jackson and Snowden Sts. and adjacent property; excavating canal from Louisville & Nashville Railroad to east and west canal now through property; laying cementing gravel, concrete walks, curbs and gutters on above-named streets. Plans and specifications can be had at office of company and of J. Paul Gaines, engineer, 1386 Faxon Ave.; certified check \$100.

Paving.—Board of Commissioners, Huntington, W. Va., will receive bids until 1 P. M. November 1 for paving sections of 19th St. and Eleventh Ave. with vitrified brick; plans and specifications on file with City Engineer, John Coon, Commissioner of Streets, etc.; A. B. Maupin, City Engineer. (See "Sewer Construction.")

Paving.—Charles T. Neff, W. A. Shuey and P. J. O'Brien, street committee, Piedmont, W. Va., will receive bids until 6 P. M. October 21 for grading and paving Fairview St.; certified check \$500; plans and specifications on file with J. M. David, Town Recorder.

Paving.—John A. Merritt, chairman Board of Bond Trustees, City Hall, Pensacola, Fla., will receive bids until noon November 7 for grading, paving and curbing various streets; work will consist of about 180,000 square yards clay or shale block, sheet asphalt, asphalt block, bituminous, wood block or concrete paving, and 116,000 linear feet concrete curb; amount of each class to be determined after proposals have been considered; certified check \$5000. Specifications and blank proposal forms may be obtained on application to George Rommel, Jr., chief engineer of board, and plans can be seen at his office.

Paving.—Commissioners of Paving District No. 27 (William Nichol, Clifton Howell and M. Silbernagle), Pine Bluff, Ark., will receive bids until 2 P. M. November 1 for construction of 20,000 square yards treated wood-block pavement, 10,000 linear feet combined curb and gutter, 13,500 cubic yards excavation and one concrete bridge. Specifications, proposal blanks and full information may be obtained from William J. Parkes, engineer, 203 Citizens' Bank Bldg., Pine Bluff; certified check \$750.

Photographs, etc.—C. David Ricciarte & Co., Pasto, Narino, Colombia, S. A., want catalogues, prices, etc., on photographs and cinematographs; view to purchases or acceptance of sole agency.

Picture Machines.—Wm. U. Harris, Mobile, Ala., wants to correspond with manufacturers of picture machines; wants opaque machine operated by incandescent or arc lights.

Piping, etc.—Pathfinder Oil & Gas Co., Durant, Okla., wants prices on piping and casing.

Piping.—Office of W. P. Knowles, Superintendent City Gas Works, Richmond, Va. Proposals received at this office, Room 109, City Hall, until 4 P. M. October 17 for furnishing f. o. b. this city, freight prepaid, 2000 length 4-inch, 2140 length 6-inch and 840 length 16-inch cast-iron bell and spigot gas-pipe, to weigh 18, 28 and 120 pounds per foot, respectively.

Piping.—Proposals, addressed to Board

of Awards, will be received by City Register, City Hall, until 11 A. M. October 18 for furnishing fire department piping for high-pressure service pumping station of fire department. Copies of specifications and plans can be obtained at office of Daniel B. Banks, consulting engineer, Maryland Savings Bank Bldg., Baltimore; deposit with consulting engineer \$10 for each set of plans; certified check \$2000; P. W. Wilkinson, secretary.

Plows.—See "Traction Engine, etc."

Plows.—C. J. Mulkey, Westminster, S. C., wants prices on gang plows.

Plumbing.—Methodist Episcopal Church South, C. L. Tubb, treasurer, Aberdeen, Miss., wants prices on plumbing for \$32,000 church.

Postal Cards.—See "Drugs, etc."

Power Machinery.—Office of Sewerage and Water Board, City Hall Annex, New Orleans, La. Proposals received by F. S. Shields, secretary, at office of board, Room 508 City Hall Annex, until 3 P. M. December 7 for furnishing, erecting and placing in operation following machinery and appliances: 6000-kilowatt horizontal high-pressure condensing steam turbine and alternating-current unit; 150-kilowatt rotary converter, with stationary transformers; seven-panel switchboard. Specifications and blank form of proposal may be obtained upon application at office of board; certified check \$500; Geo. G. Earl, general superintendent.

Printing Machinery.—See "Fertilizer Machinery, etc."

Printing Machinery and Materials.—See "Miscellaneous Machinery."

Printing Machinery.—Times Publishing Co., Collinsville, Okla., wants prices on printing machinery.

Rails.—Harry Ellis, Jr., 1138 Mutual Bldg., Richmond, Va., wants five tons 16 to 20-pound rails.

Railroad Construction.—See "Sawmill Plant."

Road Construction.—Jackson County Commissioners, Courthouse, Scottsboro, Ala., will receive bids until 11 A. M. November 8 for grading, draining and surfacing with macadam about 2.7 miles of State-aid road; will also receive bids at same time for 6.7 miles of county road; W. S. Keller, State Highway Engineer.

Road Construction.—Charles R. Kennedy, City Comptroller, New Orleans, La., will receive bids until 11 A. M. October 17 for reconstruction of cut-off road from lower line of Aurora plantation in Orleans parish to point near upper line of Bellechasse plantation, in Plaquemine parish; plans and specifications on file with City Engineer; deposit \$50; City Engineer will furnish bidders with proposal blanks.

Road Construction.—Wilcox County Commissioners, Camden, Ala., will receive bids until 1 P. M. November 7 for grading, draining and surfacing with gravel about three miles of State-aid road; W. S. Keller, State Highway Engineer, Montgomery, Ala.

Rubber Boots.—See "Cast-Iron Pipe, Fittings, etc."

Safe, etc.—Commercial and Savings Bank, Rome, Ga., wants prices on safe, vault and other bank fixtures.

Saw.—See "Traction Engine, etc."

Saw.—C. J. Mulkey, Westminster, S. C., wants prices on wood saw.

Sawmills.—See "Machinery."

Sawmill Plant.—Kaul Lumber Co., Birmingham, Ala., wants to correspond with contractors desiring to submit bids on construction of proposed sawmill at Tuscaloosa, work to include about 65,000 cubic yards excavations around mill site and 220,000 cubic yards railroad work; 20 to 25 miles railroad to be built.

Screen.—Gurney Clay Co., Franklin, N. C., wants parallel rod revolving screen with openings between rods about one-quarter inch.

Seating.—Methodist Episcopal Church South, C. L. Tubb, treasurer, Aberdeen, Miss., wants prices on pews for \$32,000 church.

Sewers.—Fort Valley, Ga., J. W. Rundell, Mayor, will soon let contract to construct about four miles of sewers.

Sewer Construction.—See "Water-works and Sewers."

Sewer Construction.—Board of Commissioners, Huntington, W. Va., will receive bids until 1 P. M. November 1 for paving sections of 19th St. and Eleventh Ave. with vitrified brick; also for construction of 12, 15 and 18-inch lateral sewer in Railroad Ave., 25th St., etc.; plans and specifications on file with A. B. Maupin, City Engineer; certified check \$500.

Sewer Construction.—City of Columbia, S. C., will receive bids until noon Octo-

ber 19 for furnishing material and constructing sewers and water mains with suitable appurtenances on Blanding, Elmwood, Gadson, Green, Grebb and Lauren Sts. and Gibbes Court; work comprises about 2640 feet eight-inch sewers and 3600 feet six-inch water pipe; plans and specifications on file with F. C. Wyse, engineer-superintendent.

Sewer System.—See "Water-works."

Sewer Machinery.—See "Miscellaneous Machinery."

Sprinkler System.—Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond, Va., wants prices on sprinkler system.

Sprinkler Systems.—G. Southey Hays, Clinton, La., wants information and prices on sprinkler system for two-story brick mercantile and office building.

Starch-making Machinery.—P. D. De Pool, old No. 86 Cuba St., Havana, Cuba, wants to correspond with manufacturers of starch-making machinery; wants best export prices f. o. b. New York.

Street Sweeper.—See "Vacuum Cleaning Apparatus."

Store Fixtures, etc.—The Racket, W. K. Jennings, proprietor, De Funak Springs, Fla., wants to correspond with handlers of store fixtures, clothes hangers, etc.

Tank.—Anderson, Cain & Shepherd, 907 American National Bank Bldg., Richmond, Va., wants prices on gravity tank, 25,000 gallon capacity.

Tank.—Charles L. Eskridge, Shelby, N. C., wants prices on air tank.

Telephones.—See "Miscellaneous Machinery."

Textile-mills Equipment.—See "Machinery."

Traction Engine, etc.—C. J. Mulkey, Westminster, S. C., wants prices on traction or other engine, wood saw, gang plows and trucks or cars to be used with engine for hauling freight and passengers on dirt road.

Trucks.—Arapahoe-Barick Creek Tramway Co., J. M. Reel, manager, Arapahoe, N. C., wants trucks for narrow-gauge road.

Tubs.—See "Flower-pots."

Turret Lathe.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 24, and opened immediately thereafter, to furnish at Navy-yard, Norfolk, Va., a turret lathe. Applications for proposals should refer to schedule 396. Blank proposals furnished upon application to navy pay office, Norfolk, Va. or to Bureau, T. J. Cowle, Paymaster-General, U. S. N.

Vacuum Cleaning Apparatus.—J. A. Littlefield, Sanitary Commissioner, Waco, Tex., wants vacuum street sweeper for city use.

Vending Machines.—J. Harrison Yates, Herndon, Va., wants catalogues and prices on all kinds of vending machines.

Water Tanks.—R. R. Roberts, Mayor, Northfork, W. Va., will receive bids until 4 P. M. October 23 for erection complete and furnishing materials for two 50,000-gallon water tanks; plans and specifications on file with Mayor and with Walter Proctor, City Engineer; certified check \$500.

Water-works.—W. H. Fetner, chairman Board of Water Commissioners, 209 2d St.,

Macon, Ga., wants to correspond with hydraulic engineers relative to proposed water-works improvements estimated to cost \$200,000.

Water-works.—Loreauville, La., will receive bids until November 15 to erect wooden tower and tank and complete water-works. Specifications can be obtained from Paul Bassin, Tax Collector, Box 23.

Water-works.—Board of Improvement, Water and Sewer Improvement District No. 1, M. W. Hazel, secretary, Marked Tree, Ark., will receive bids until 10 A. M. October 20 for construction of water-works system complete, with pumping plant and tank, and system of combined sewers in and for said district; plans and specifications may be obtained from J. A. Wright, engineer, Marked Tree.

Water-works.—City of Columbia, S. C., will receive bids until noon October 19 for furnishing material and constructing about 3600 feet six-inch water pipe on various streets; F. C. Wyse, engineer-superintendent. (See "Sewer Construction.")

Water-works and Sewers.—Sealed proposals will be received by Water-works and Sewer Commission, A. B. Mahan, secretary, Jellico, Tenn., until 2 P. M. November 1 for either or all of following items, approximately: (a) 1160 tons cast-iron pipe; (b) 70 hydrants, 80 valves; (c) 500,000-gallon reinforced concrete reservoir; (d) laying 12½ miles 3 to 10-inch pipe; (e) headworks at springs; (f) constructing 5.7 miles 8 to 15-inch pipe sewers, with necessary accessories; certified check 3 per cent. amount of proposal; rights reserved. For specifications address Walter G. Kirkpatrick, engineer, Jackson, Miss.

Water-works.—E. A. Miller, clerk, Muldrow, Okla., will receive bids until 7 P. M. October 10 for construction of combined water-works and electric-light plant; estimated cost, \$33,000; plans and specifications on file with Town Clerk and Western Engineering Co., 703 American National Bank Bldg., Oklahoma City, Okla.; certified check 5 per cent. o.

Water-works and Sewer System.—City of Maryville, Tenn., A. K. Harper, Mayor, is considering granting franchise for construction of water-works and sewerage system.

Well Drilling.—P. L. Brady, Mayor, Hearne, Tex., will receive bids until October 16 for drilling eight-inch well not over 400 feet in depth; contractor to furnish pipe and 40-foot strainer.

Whistles.—See "Electric Whistles."

Window-operating Device.—L. A. Koeth, Room 2 Masonic Temple, Wilmington, N. C., wants prices on window-operating device.

Woodworking Machinery.—Dr. F. S. Pearson, 25 Broad St., New York, will ask bids within few days on equipment for woodworking plant at El Paso, Tex., first unit of which is estimated to cost \$650,000.

Woodworking Machinery.—See "Cross-arm Machinery, etc."

Woodworking Machinery.—Florence C. Pogliano, San Pedro 76-Flores, Buenos Aires, Argentine Republic, South America, wants to correspond with manufacturers of woodworking machinery; view to representation.

INDUSTRIAL NEWS OF INTEREST

Stove Foundry for Sale.

The Mascot Stove Manufacturing Co., Dalton, Ga., offers for sale in our Classified Opportunities columns its entire manufacturing plant located in that city. It will be sold to the highest bidder on November 2, 1911. This is described as a rare chance to invest about \$15,000 for one of the best foundries in the South. Satisfactory reasons and further information will be given to interested parties on request.

Stationery at Attractive Prices.

The Franklin Press Co., Petersburg, Va., is making unusually low prices for printed stationery of the kind that is most likely to be in demand. This company has a plant that is well equipped with the latest automatic machinery and can handle orders of any size. Samples of the work which will best testify to the values offered will be sent on request.

American Representative of European Bank.

Mr. S. R. Shepherd, for the past two years secretary of the Orange (Tex.) Commercial Club, has accepted the position of American representative of the investment department

of the Bank Internationale d'Emission and de Credit of Brussels, Berlin, Paris and London. He will establish offices on November 1 at 1109 Stock Exchange Bldg., Chicago. This banking company is interested in securing good railroad and industrial securities and will consider aiding the development of new high-grade propositions.

Trump Manufacturing Co.'s Sales.

As a result of the demand for the water-wheels manufactured by the Trump Manufacturing Co., Springfield, O., the plant is working overtime until nine o'clock at night. Among the important installations recently made of machinery built by this company, two are in the State of Michigan, five in the State of Washington, two in Tennessee, two in Massachusetts, one each in Vermont, New Hampshire, Pennsylvania, Indiana and Canada; two in Wisconsin, three in Pennsylvania and Iowa, five in New York and Ohio. These sales represent an aggregate horsepower of over 22,000.

Big Demand for Cotton Gin Engines.

The large cotton crop being harvested has made a good demand for machinery used in handling that staple, especially the ginning

machinery. The Houston-Stanwood-Gamble Company has experienced a strong demand for its engines for use with cotton gins. It is stated that several carloads of these engines have been shipped South since January 1, also that the sales of the company have been very large this year in all sections of the country, besides the cotton-growing States. A Texas company in writing of this engine stated that "it runs like a watch, and you would hardly know it was running except for the exhaust."

L. O. Smith Company Contracts.

Activity in the construction of buildings and in the erection and extension of industrial plants in the South is increasing the demand for the work and equipments furnished by the Smith Roofing Co. of Wilmington, N. C. The manager of this enterprise is L. O. Smith, and while at High Point last week he advised a representative of the Manufacturers Record that the Smith Roofing Co. had recently secured a contract for a dust-collecting system for the Harris Granite Co. of Salisbury, N. C. Besides all kinds of roofing and dust collectors, the L. O. Smith Company installs ventilating and heating equipments, on which it is prepared to furnish estimates throughout the South.

Valuable West Virginia Timber for Sale.

The standing timber on 2300 acres of well-timbered land in Upshur county and on 1050 acres in Braxton county, West Virginia, is offered for sale by Walter E. Fleming, receiver, Parkersburg, W. Va. The land in Upshur county lies on the Little Kanawha River in several contiguous parcels, and is virgin forest except as to large poplar, which was removed 20 years ago. That in Braxton county lies on Gulf Run and England Run, tributaries of the Little Kanawha River. These tracts are all known as Burns lands and contain much valuable timber. Bids will be received until December 15 on either or both of the two tracts.

Sale of John H. Core Lands.

Special commissioners appointed for the purpose will sell at public auction at Norfolk Real Estate and Stock Exchange, Norfolk, Va., October 24, 1911, at noon, the following real estate located in Norfolk: 85 acres, located on Armistead Bridge road, adjoining the Ghent section of Norfolk. This sale is to be made subject to confirmation of the Norfolk Court. A map of the property and its surroundings and any other information desired may be obtained by application to the following commissioners or auctioneers: Commissioners Wm. W. Old, Jr., A. W. Patterson, L. Clay Kilby; auctioneers, H. C. Hoggard & Co., Stephenson & Taylor, C. N. Whitehurst & Co. This property belongs to the estate of John H. Core, deceased.

Weber Chimneys in the Charleston Hurricane.

It is a noteworthy fact that in the great hurricane that passed over Charleston and its vicinity last August, doing great damage to many industrial plants, the three chimneys in that city constructed by the Weber Chimney Co. of Chicago were not damaged in the least degree. These chimneys are guaranteed to withstand a wind velocity of 100 miles per hour, but this hurricane reached an estimated velocity of 120 miles, still the chimneys were not affected. These chimneys are located at the A. C. Tuxberry Lumber Co.'s plant, the E. P. Burton Lumber Co.'s plant and at the North State Lumber Co.'s plant. They were all built in 1910. The Burton lumber yard is adjacent to the U. S. Navy-yard, where considerable damage was done. This is considered an excellent record of the stability and strength of concrete chimneys, and the Weber company is particularly pleased with it.

"Chebeco" Improved Sewed Balata Belting.

The Chesapeake Belting Co., Baltimore, has completed a plant for the manufacture of its "Chebeco" improved sewed balata belting and states that it is now in a position to offer this belting in any quantity. This company has been making stitched canvas belting for 26 years, in which time it has become well known throughout the country. From this long experience the company is well acquainted with textile belting requirements and the proper goods with which to meet them. In the manufacture of "Chebeco" balata belting care is exercised that the highest grade of cotton duck is used. It is made in the Chesapeake Belting Co.'s own plant, and is specially woven to show great strength and serviceability. The best grade of balata gum obtainable is used in combination with this cotton duck to produce the "Chebeco" belting. Claims for it

are that it is extremely durable; that owing to its flexibility it is suitable for high speeds; that it will transmit the full load without slip and requires no dressing; that the price, based on quality, is low. Points which the company places stress upon for this belt are that it will not open up in service; that it is guaranteed for all conditions of power transmission up to temperature of 140 degrees F., and it is further guaranteed by the company to do any work that any other balata belting of the same width and ply will do and at a low price considering its quality. This belting has been thoroughly tried and tested and its qualities proven by the company before placing it on the market.

TRADE LITERATURE.

Dixie Seal & Stamp Co.

A stencil catalogue and a monogram circular have been issued by the Dixie Seal & Stamp Co., Atlanta, showing the types of stencils and monograms made by the company. Several pages of styles of stencils are included, and the circular contains copies of automobile monograms and others in brass, polished metal and nickel-plate. Stencils and rubber stamps for fruit boxes, "for sale" stencils, stencil trade-marks, stencils for marking cotton duck, bags, etc., are shown, together with price-lists concerning each style. Office supplies are also included in the catalogue.

Sullivan Smokeless Furnace Equipment.

A booklet, "The Smoke Problem," issued by the National Combustion Co., 90 West St., New York, illustrates and describes the smokeless equipment manufactured by it under the I. M. Sullivan patents. It is stated that the Sullivan smokeless furnace equipment saves at least 5 per cent. of the fuel and eliminates smoke. The equipment requires no change in furnace construction, and the requirements of smoke o'fanes are at once complied with. It is substantial and simple in construction and cost is low. Manufacturers and others who are interested will receive full information on request.

Large Installation of Chloride Accumulators.

The Electric Storage Battery Co., Philadelphia, has issued bulletin No. 132 on the installation of the "Chloride Accumulator" for the Goldfield Consolidated Mines Co. of Goldfield, Nev. The bulletin includes diagrams of the transmission system of the power company and several illustrations of the "Chloride Accumulator" installation. This installation was made for the advantages it affords in absorbing momentary fluctuations, improving the all-day load factor, and for furnishing current for emergencies in case of failure of power supply. The description of this installation is of technical and practical interest to operators and owners of electric light and power plants and to officials of industrial companies using power.

Hendricks' Commercial Register.

The 20th edition of Hendricks' Commercial Register of the United States for buyers and sellers has been issued. This register has been published annually since 1891. It maintains its high degree of completeness by constant attention and the addition of many thousands of items each year. Its aim is to furnish complete classified lists of manufacturers, and forms a valuable mailing list. It covers every branch of architectural, engineering, electrical, mechanical and kindred trades and professions. The total number of classifications is over 45,000, each representing the manufacturers or dealers in some machine, tool, specialty or material required in these industries. It numbers 1419 pages, upwards of 350,000 names and addresses. It is published by the S. E. Hendricks Company, 74 Lafayette St., New York.

Western Electric Co.'s Battery Bulletin.

"Central Battery vs. Local Battery Operation for the Small Exchange" is the title of bulletin No. 1017, which has just been issued by the Western Electric Co., 463 West St., New York. This interesting and instructive bulletin compares central and local battery equipment from a service and cost standpoint. It gives the local conditions to be considered in determining the type of system, and under this head takes up the following subjects: Character of service, estimated growth of town, outside construction, condition of old equipment, the switchboard and the telephones. It shows the possibilities of increased service from central bat-

tery operation, due to better service and decreased maintenance expense. It also describes the use of the convertible switchboard, designed especially for this service.

It points out the things to be considered when deciding whether an exchange having from 50 to 500 lines should be operated on local battery or central battery.

MOTOR TRUCK AND TRACTOR NEWS.

Recent Sales of Commercial Cars in Baltimore.

The Crown Cork & Seal Co. has placed an order for its third Grabowsky truck. The Footer Dye Works has purchased a White truck, which is extensively used in suburban and city deliveries. The local Kissel Kar agent reports the sale of a 50-horse-power truck to the Red "C" Oil Co. Snellenburg Bros. has purchased a Kissel Kar delivery wagon. The Fleischmann Yeast Co. has placed a Chase delivery wagon in service, manufactured by the Chase Motor Truck Co., Syracuse, N. Y. The Chesapeake & Potomac Telephone Co. is operating four Chase delivery wagons. Mount Washington Electric Light & Power Co. is operating a White 20-horse-power motor truck. The Texas Company operates a Mack oil truck in its city and suburban delivery.

General Motors Co.

In view of the importance of the General Motors Co. and the position it occupies in the motor-vehicle trade, a statement of the companies which it includes is interesting. This company was formed in September, 1908, under the laws of New Jersey as a holding company, and it has acquired practically all of the stocks of the following companies engaged in the manufacture of motor cars and motor-car parts: Anderson Carriage Co., Buick Motor Co., Cadillac Motor Co., Detroit Motor Parts Co., Elmore Manufacturing Co., Elwell Parker Electric Co., Northway Motor Co., Oakland Motor Co., Olds Motor Works, Rambler Automobile Co., Rapid Motor Vehicle Co., Reliance Motor Co. and the Welch Motor Car Co. Works of these companies are situated in Michigan excepting one in Indiana and two in Ohio.

The Mals Motor Truck in Chicago.

Results of the Chicago Motor Club's three-day commercial car contest show the Mals motor truck to have made a perfect score.

factured by the B. F. Board Motor Truck Co., Alexandria, Va., which company turns out trucks from 1000 pounds to 10 tons capacity.

Motor Trucks in Use in the United States.

Mr. Alfred Reeves of Brooklyn, N. Y., in an address before the automobile school of the Y. M. C. A. in that city recently made the following statement regarding motor trucks in the United States: "The commercial motor vehicle is growing in favor every day, as proven by their appearance on our streets, and it offers the greatest future for motor-car manufacture. At present we can have but a faint idea of the uses to which they will be put in five or six years' time. Every possible kind of trucking is now being done by motor vehicles, and our cities are using them in increasing numbers in the departments of fire, police, health, street cleaning and highway improvements. The farmer uses them for running his machinery, and they are fast supplanting the horse in rural free delivery and other departments of the postal service." He stated that "65 companies are producing motor trucks or commercial vehicles exclusively. Nine thousand trucks and package deliveries are now in use, and 18,000 trucks and package delivery wagons are estimated to be made in the next 12 months. Eleven thousand and four hundred dealers are selling cars in every town of importance in the country, with a much larger number of garages in use."

The Red "C" Oil Co.'s Kissel Oil Car.

The accompanying illustration shows the delivery car of the Red "C" Oil Co., Baltimore, W. A. Fehsenfeld, president, as it has been equipped for wholesale delivery service. This tank car has a capacity of 1000 gallons, and is used to make deliveries in the suburbs of Baltimore and as far as 20 miles distant. The car has proved to be of advantage in this work on account of its prompt and re-



RED "C" OIL CO.'S OIL DELIVERY TRUCK.

This contest was for the purpose of showing the business men of Chicago the service that trucks can render in comparison with that of horse-drawn vehicles. Thirty-two cars competed in a 60-mile-a-day run for three days over the same roads that are used in delivering goods. A team of horses was in the competition and required two days to make the route the Mals truck made in one day. This is the same truck that in the Chicago-Detroit contest recently made the lowest cost per ton mile of the 26 competitors.

The Excellent Performance of the Board Motor Truck.

The run of the three-ton Board motor truck from Washington to Boston was made according to the schedule previously laid down for this 500-mile run. This trip was made to demonstrate the staying powers of this truck, and in order to show the confidence which the manufacturers have in it, the trip was accurately scheduled before the start. It carried the full load of three tons and encountered many muddy and rough roads and steep grades. It is stated that during the entire trip not a single replacement was made, the extent of repairs being limited to four minor adjustments. No adjustments whatever were required from Philadelphia and Springfield, Mass., where good roads prevailed. This truck is man-

nable deliveries and the fact that it gets over rough roads and steep grades in all seasons and for greater distances than the horse-drawn vehicles can be relied upon to cover. This is a 50-horse-power Kissel Kar, manufactured by the Kissel Motor Car Co. of Hartford, Wis., has solid tires, and is built for heavy service. The advertising value of this car is considered in its list of advantages, as it is noticed in its delivery rounds and covers a large amount of territory and gives confidence of prompt delivery to purchasers of the Red "C" Oil Co.'s products.

Speedwell Motor Trucks.

The Speedwell trucks built by the Speedwell Motor Car Co., Dayton, O., are made in two, four and six-ton capacities. Two-ton truck has four cylinders, 30-horse-power motor, and the four and six-ton trucks 50-horse-power motors. Each unit in these trucks is constructed to withstand the heavy duty imposed upon it, a liberal margin being provided as an assurance of the efficiency and long life. Special claims are made for the low fuel consumption and low upkeep expense. The motor may be removed if necessary without taking off the radiator, and the transmission can be removed or inspected by merely lifting a plate. An interesting condition of service is rendered in Pitts-

October 12, 1911.]

MANUFACTURERS RECORD.

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LOUISVILLE & NASHVILLE RAILROAD COMPANY.

SIXTIETH ANNUAL REPORT—FOR THE FISCAL YEAR ENDED JUNE 30, 1911.

Louisville, Ky., October 4, 1911.

To the Stockholders of the Louisville & Nashville Railroad Co.:
The Board of Directors of your Company respectfully submits the following report for the fiscal year ended June 30, 1911:

MILEAGE.

—Miles.—

<i>I.—Lines Owned and Operated:</i>	
(1) Owned—Property deeded.....	544.45
(2) Operated but not owned:	
(a) Operated as owner of entire Capital Stock.....	118.97
(b) Operated under lease.....	221.88
(c) Operated for account of owners.....	216.53
(d) Operated under trackage arrangements.....	1,101.83
(3) Owned, leased to N. C. & St. L. Ry.—operated under trackage arrangements.....	5.46
(4) Owner of entire Capital Stock, property operated separately—operated by this Company under trackage arrangements.....	6.46
Total operated.....	4,621.50
Average mileage operated during the year, 4.598.39.	
<i>II.—Lines Operated Under Their Separate Organizations in which This Company Owns a Majority of the Capital Stock or is Interested as Joint Owner or Lessee:</i>	
Nashville, Chattanooga & St. Louis Railway (a majority of the Capital Stock owned).....	975.85
Central Transfer Railway & Storage Co. (Louisville (one-half of the Capital Stock owned)).....	.67
Georgia Railroad and Dependencies (interested as joint lessee).....	571.00
Chicago, Indianapolis & Louisville Railway (a majority of the Capital Stock owned jointly with the Southern Railway Co.).....	616.63
Louisville, Henderson & St. Louis Railway, less mileage of Louisville & Nashville Railroad operated under trackage arrangements (a majority of the Capital Stock owned).....	181.70
Woodstock & Blocton Railway (one-half of the Capital Stock owned).....	7.73
Less—Mileage used by this Company under trackage arrangements:	2,353.58
Woodstock & Blocton Railway.....	7.73
Nashville, Chattanooga & St. Louis Railway.....	50.74
Louisville, Henderson & St. Louis Railway.....	.26
Total.....	58.73
Less—Mileage operated by this Company under trackage arrangements.....	5.46
Total mileage.....	2,294.85
<i>III.—Lines Owned by This Company but Operated by Other Companies:</i>	
Paducah & Memphis Division (leased to Nashville, Chattanooga & St. Louis Railway at 5 per cent. on cost of road).....	254.20
Less—Mileage operated by this Company under trackage arrangements.....	5.46
Total mileage.....	248.74
Clarksville & Princeton Branch—Gracey, Ky., to Princeton, Ky. (leased to Ohio Valley Railway Co. at \$12,039.70 per annum).....	20.51
Total Mileage.....	7,185.80
Total mileage June 30, 1910.....	7,154.41
Increase.....	31.39
Accounted for as follows:	
Additions:	
Kentucky Highlands Railroad.....	15.88
Mortons-Alkinson Cut-off, Henderson Division.....	8.17
Sundry net additions.....	7.34
BONDED DEBT.	31.39
Bonded Debt June 30, 1910, total issue.....	\$155,344,500
Bonds Drawn for Sinking Funds:	
Refunded:	
Evansville, Henderson & Nashville Division Gold.....	\$106,000
General Mortgage Gold.....	463,000
Pensacola & Atlantic Railroad First Mortgage Gold.....	80,000
Pensacola Division First Mortgage Gold.....	19,000
Unredeemed (Not Presented for Payment):	
General Mortgage.....	\$38,000
Evansville, Henderson & Nashville Division Gold.....	4,000
Pensacola & Atlantic Railroad First Mortgage Gold.....	2,000
Pensacola Division First Mortgage Gold.....	1,000
Bonds Issued:	
Taled Fifty-year 4 per cent. Gold.....	\$596,000
Atlanta, Knoxville & Cincinnati Division 4 per cent. Gold.....	84,900
Less:	
Bonds Owned:	
In Treasury.....	\$10,501,000
Deposited in Trusts as Collateral.....	7,079,000
Held in Sinking Funds.....	849,000
Total Outstanding Bonded Debt in hands of public June 30, 1910.....	\$136,883,500
Total Outstanding Bonded Debt in hands of public June 30, 1910.....	127,627,500
Increase in Bonds outstanding in hands of public.....	9,256,000
Accounted for as follows:	
Bonds Sold:	
Atlanta, Knoxville & Cincinnati Division 4 per cent. Gold.....	\$10,000,000
Add:	
Henderson Bridge Co. First Mortgage Bond, drawn for Sinking Fund—Unredeemed June 30, 1910, redeemed during this fiscal year and paid into Sinking Fund.....	1,000
Deduct:	
Bonds drawn for Sinking Funds, including Redeemed and Unredeemed Bonds.....	\$713,000
Bonds purchased for Sinking Funds.....	55,000
Less:	
Bonds withdrawn from Treasury and canceled for Sinking Funds.....	23,000
Increase as shown above.....	745,000
GENERAL RESULTS.	\$9,256,000
The General Results, as given in detail in Table No. I, are here summarized:	
Operating Revenues.....	\$53,992,740 78
Less Operating Expenses, 71.27 per cent.....	38,479,822 61
Net Operating Revenues, 28.73 per cent.....	1,938,069 20
Other Income:	\$13,575,828 97
From Rents.....	\$657,586 97
From Investments.....	911,182 51
From Interest.....	410,909 49
From Outside Operations.....	40,403 41
Total Income.....	2,020,082 41
Deductions from Income:	\$15,595,911 38
Interest on Bonded Debt.....	\$6,059,891 66
Rents.....	445,246 90
Sinking Funds.....	233,204 50
South & North Alabama Railroad Co. surplus (included in above).....	\$8,857,568 92
Net Income carried to Profit and Loss Account.....	\$8,555,332 71
The balance to credit of Profit and Loss Account amounts to \$31,513,953.26.	

GROWTH OF TRAFFIC.

The growth of traffic for the past ten years is shown by the following table:

Years.	Average miles operated.	Operating revenues.	Operating expenses.	Net operating revenues.
1901-1902.....	3,326.75	\$30,712,257 37	\$20,902,437 84	\$9,809,819 53
1902-1903.....	3,438.93	35,449,377 84	23,970,812 44	11,478,565 40
1903-1904.....	3,618.19	36,943,791 73	25,141,548 27	11,802,244 46
1904-1905.....	3,826.31	38,517,070 72	26,490,020 97	12,027,049 75
1905-1906.....	4,130.91	43,006,994 23	30,933,465 71	12,075,532 52
1906-1907.....	4,306.33	48,263,945 20	35,781,309 54	12,482,642 66
1907-1908.....	4,347.80	44,620,281 16	33,594,291 05	11,025,990 11
1908-1909.....	4,393.11	45,425,831 45	39,627,499 48	15,798,391 97
1909-1910.....	4,554.30	52,433,381 94	44,985,578 78	17,447,803 16
1910-1911.....	4,598.33	53,993,740 78	48,479,822 61	15,513,918 17

*Does not include Additions and Betterments heretofore included in Operating Expenses.

The Board acknowledges the fidelity and efficiency with which the officers and employees of the Company have served its interests.

For the Board of Directors.

H. WALTERS, Chairman.

M. H. SMITH, President.

TABLE NO. I.
INCOME ACCOUNT.

Operating Income:	
Rail Operations:	
Operating Revenues:	
Revenue from transportation.....	\$53,607,978 22
Revenue from operations other than transportation.....	385,762 56
Total operating revenues.....	\$53,992,740 78
Operating Expenses:	
Maintenance of way and structures.....	\$9,178,192 27
Maintenance of equipment.....	9,490,559 30
Traffic expenses.....	1,124,598 79
Transportation expenses.....	17,588,355 63
General expenses.....	1,097,677 22
Total operating expenses, 71.27 per cent.....	38,479,822 61
Net operating revenues, 28.73 per cent.....	\$15,513,918 17
Outside Operations:	
Revenues:	
Expenses.....	\$388,972 82
Surplus.....	40,403 41
Total net revenues.....	\$15,554,321 58
Taxes:	
Operating Income:	
Income from Rents:	
Clarksville & Princeton Branch.....	\$12,029 70
Paducah & Memphis Division.....	296,506 20
Equipment.....	360,080 27
Various sources.....	78,960 70
Interest from Investments:	
Chicago, Indianapolis & Louisville Railway Stock.....	\$226,830 12
Nashville, Chattanooga & St. Louis Railway Stock.....	439,656 00
Charleston Terminal Co. Bonds.....	12,000 00
Louisville Property Co. Bond.....	64,000 00
Wholesale Merchants' Warehouse Co. Bonds.....	19,900 00
Cairo & Thelby Railroad Co. Bonds.....	29,329 00
Lexington & Eastern Railway Co. Bonds.....	63,444 01
Sundry Bonds and Stocks.....	64,031 51
Interest from various sources (net).....	911,182 54
Interest from various sources (net).....	410,309 49
From Which Deduct:	
Charges against Income:	
Interest on bonded debt.....	\$6,059,891 06
Rents paid for lease of roads—	
Additions and Betterments on Nashville & Decatur Railroad.....	\$18,632 55
Guaranteed dividend on Nashville & Decatur Railroad stock.....	118,061 25
Rents of other roads.....	\$136,693 80
Rents for tracks, yards, and other facilities (net).....	37,511 59
Sinking Fund Charges:	
Direct payments for which no bonds are received.....	\$10,400 00
Accrued premiums on bonds drawn for sinking funds.....	72,900 00
Accrued interest on Company's bonds in sinking funds.....	49,904 50
Interest from various sources (net).....	233,204 50
Debits:	
From Creditors:	
Bonds Sold:	\$27,615,361 00
Interest on bonded debt:	110,400 00
Interest accrued on Company's Bonds in Sinking Funds:	49,904 50
Georgia Railroad lease:	
Income from operation.....	\$10,361 00
Income from securities.....	60,369 50
Unpaid amounts on Audited Payrolls and Vouchers prior to July 1, 1910, closed off.....	71,130 50
Sale of lands in State of Alabama.....	25,700 62
For amount of interest accruing on advances to the Cairo & Thelby Railroad Co. prior to July 1, 1910.....	26,096 79
Balance in account, "Reserve for General Purposes," closed off.....	98,682 15
Adjustment of accounts representing material in private sidings.....	63,099 13
Miscellaneous credits.....	46,255 35
Net surplus from operation for year ended June 30, 1911, transferred from Income Account.....	35,393 01
Debits:	
For Cash Dividend 3½ per cent., payable February 10, 1911.....	\$2,100,000 00
For Cash Dividend 3½ per cent., payable August 10, 1911.....	2,100,000 00
Discount on Atlanta, Knoxville & Cincinnati Division Bonds sold during the year.....	200,000 00
For adjustments of accounts of Georgia Railroad Lease for prior years.....	115,710 30
Expenditures for Additions and Betterments on the Nashville & Decatur Railroad during the year ended June 30, 1910.....	24,522 89
Sundry net rentals accruing prior to July 1, 1910.....	9,881 06
Expenditures for preliminary and experimental surveys—charged off.....	8,166 59
Miscellaneous debits.....	1,122 66
Appropriated surplus—amount invested in Sinking and Redemption Funds.....	\$267,071 95
Balance to credit of Profit and Loss Account, June 30, 1911.....	31,246,881 31
Debits:	
For Cash Dividend 3½ per cent., payable February 10, 1911.....	\$2,100,000 00
For Cash Dividend 3½ per cent., payable August 10, 1911.....	2,100,000 00
Discount on Atlanta, Knoxville & Cincinnati Division Bonds sold during the year.....	200,000 00
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Debits:	
For Cash Dividend 3½ per cent., payable February 10, 1911.....	\$2,100,000

SEABOARD AIR LINE RAILWAY.

FISCAL YEAR ENDED JUNE 30, 1911.

GENERAL INCOME ACCOUNT RAIL AND WATER LINES, FOR YEAR ENDED JUNE 30, 1911.			
Gross Revenue.....	\$22,606,452.72	1910.	Increase.
Operating Expenses and Taxes.....	15,999,851.84	\$20,856,373.81	\$1,750,078.91
Operating Income.....	\$6,606,600.88	14,542,683.48	1,457,168.36
Other Income.....	147,419.56	137,836.67	9,582.89
Total Income.....	\$6,754,020.44	\$6,313,690.33	\$292,910.55
Interest.....	4,697,186.04	4,354,520.94	252,665.10
Rentals and Other Deductions from Income.....	317,654.50	291,732.38	15,902.12
Total Deductions.....	\$4,324,840.54	\$4,556,273.32	\$368,567.22
Surplus Income over Charges.....	1,829,179.90	1,895,233.68	*66,073.78
Surplus Income Rail Lines.....	1,707,905.01	1,735,035.35	*27,370.32
Surplus Income Water Lines.....	121,214.89	160,218.35	*\$9,003.46

MILEAGE OPERATED.

The mileage of the Seaboard Air Line Railway and subsidiary lines in operation on June 30, 1910, was..... 2015.39

Extensions, etc., constructed during the year..... 29.33

Trafficage..... 3044.72

Mileage in operation on June 30, 1911..... 3046.18

Made up as follows:

MILEAGE OWNED.

Seaboard Air Line Railway and branches..... 2980.59

LEASED LINES.

Meldrim, Ga., to Lyons, Ga..... 57.65

TRACKAGE.

Howells, Ga., to Atlanta, Ga..... 3.00
Hilton, N. C., to Navassa, N. C..... 2.40
In Birmingham, Ala., and vicinity..... 15.11
Near Mulberry, Fla..... 1.46

79.62

3060.21

DEDUCT.

Amelia Branch branch, leased to Street Railway Company at Fernandina, Fla.... 2.00
Gibson, N. C., branch, leased to the North & South Carolina Railway..... 10.13
Silver Springs, Fla., branch, leased to the Ocala Northern Railway..... 1.90

14.93

3046.18

Total mileage operated June 30, 1911..... 2980.59

Sidings (including 18.26 miles sidings on Leased Lines and Trackage)..... 290.12

GENERAL BALANCE SHEET, JUNE 30, 1911.

PROPERTY INVESTMENT:		
ASSETS.		
Road and Equipment:		
Road.....	\$15,671,101.69	
Equipment.....	\$16,558,964.52	
Equipment Series "I" and "K" (Per Contra)	960,000.00	
	\$17,518,964.52	
Less: Reserve for Accrued Depreciation.....	1,072,210.90	16,446,753.62
General Expenditures.....		28,876.66
		\$152,146,731.97
Securities:		
Securities—Proprietary, Affiliated and Controlled Companies, Pledged:		
Stocks.....	603,312.74	
Securities—Proprietary, Affiliated and Controlled Companies, Unpledged:		
Stocks.....	46,386.42	
Bonds.....	293,000.00	
		\$52,699.16
Other Investments:		
Leased Rail and Material.....	365,471.12	
Securities—Pledged.....	1,048,979.15	
Securities—Unpledged.....	310,892.25	
Common Capital Stock in Treasury.....	496,600.00	1,725,342.52
Preferred Capital Stock in Treasury.....	1,105,900.00	1,092,500.00
Total.....		\$156,327,273.65

WORKING ASSETS:		
Cash with Treasurer and Cashier.....	\$1,009,608.22	
Cash in Transit.....	337,946.86	
Cash with Fiscal Agencies.....	895,714.62	
Loans and Bills Receivable.....		\$2,243,269.70
Traffic and Car Service Balances due from other Companies.....		37,903.94
Net Balances due from Agents and Conductors.....		301,574.74
Due from United States Government.....		300,335.56
Miscellaneous Accounts Receivable.....		57,762.01
Claims Receivable.....		352,910.32
Material and Supplies.....		35,154.33
Other Working Assets.....		1,332,602.96
Total.....		155,184.67

DEFERRED DEBIT ITEMS:		
Advances to Proprietary, Affiliated and Controlled Companies.	\$302,627.42	
Working and Other Advances.....	115,220.35	
Insurance paid in Advance.....	75,480.67	
Unextinguished Discount on Securities.....	10,031,882.62	
Special Deposits.....	5,469.72	
Cash in Redemption Funds.....	36,313.09	
Claims in Suspense.....	238,968.51	
Other Deferred Debit Items.....	134,816.77	
Total.....		\$4,816,698.23
Total.....		\$10,840,779.15

LIABILITIES:		
STOCK:		
Common Capital Stock.....	\$37,516,000.00	
Preferred Capital Stock.....	25,000,000.00	
Total.....		\$62,516,000.00

MORTGAGE, BONDED AND SECURED DEBT:		
S. A. L. Railway First Mortgage Bonds.....	\$39,775,000.00	
Less: Pledged as Collateral.....	27,000,000.00	
Mortgage Bonds Proprietary Companies.....	\$42,688,000.00	12,775,000.00
Less: Pledged as Collateral.....	5,623,000.00	
S. A. L. Railway Refunding Mortgage Bonds.....	\$20,295,000.00	37,065,000.00
Less: Pledged as Collateral.....	1,295,000.00	
S. A. L. Railway Adjustment Mortgage Bonds.....	\$25,000,000.00	19,000,000.00
Less: Held by Trustee.....	20,500.00	24,979,500.00
		93,819,500.00
Equipment Trust Obligations.....	4,496,790.00	960,000.00
Equipment Trust Certificates Series "I" and "K" (Per Contra)		5,456,790.00
Total.....		\$99,276,290.00

WORKING LIABILITIES:

Loans and Bills Payable.....	\$953,900.00
Traffic and Car Service Balances due other Companies.....	408,390.45
Audited Vouchers Unpaid.....	634,668.91
Wages Unpaid.....	739,185.96
Claim Authorities.....	34,379.11
Agents' Traffic Drafts.....	111,203.12
Miscellaneous Accounts Payable.....	5,833.98
Matured Interest Funded Debt.....	707,486.52
Matured Interest Equipment Trust Obligations.....	14,227.50
Matured Bonded Debt.....	120,000.00
Matured Equipment Trust Obligations.....	54,000.90
Other Working Liabilities.....	24,017.59
Total.....	\$3,789,630.55

ACCRUED LIABILITIES NOT DUE:

Accrued Interest Funded Debt.....	\$435,079.17
Accrued Interest Equipment Trust Obligations.....	27,841.68
Accrued Interest Adjustment Mortgage Bonds.....	82,675.00
Other Accrued Interest.....	10,333.34
Accrued Taxes.....	348,911.88
Other Accrued Accounts.....	13,026.11
Total.....	\$1,007,867.38

DEFERRED CREDIT ITEMS:

Operating Reserves.....	\$228,062.29
Other Reserves.....	79,126.76
Interchangeable Mileage Tickets.....	127,467.58
Reserve for Outstanding Stock of Proprietary Companies.....	32,126.41
Other Deferred Credit Items.....	46,484.38
Total.....	\$171,984,751.03

This Company is also liable as a guarantor of the:

Jacksonville Terminal Company First Mortgage (Seaboard proportion 1-61)..... Bonds, \$500,000.00

Birmingham Terminal Company First Mortgage (Seaboard proportion 1-61)..... 1,940,000.00

Wilmington Railway Bridge Co. First Mortgage (Seaboard proportion 1-21)..... 217,900.00

Macon, Dublin & Savannah Railroad First Mortgage..... 1,340,000.00

Savannah & Statesboro Railroad First Mortgage..... 185,900.00

Richmond-Washington Co. Collateral Trust Mortgage (Seaboard proportion 1-61)..... 9,500,000.00

EQUIPMENT.

The equipment remaining undelivered on June 30, 1910, under equipment agree-

ment, series "L," as follows:

260 ventilated box cars,

25 stock cars,

was received during this fiscal year.

A new equipment agreement, series "M," was entered into on May 25, 1911, for the purchase of:

10 freight locomotives,

10 passenger coaches,

3 postal cars,

providing for the issue of trust obligations aggregating \$348,700, maturing in 20 years,

and bearing interest at the rate of 5 per cent. per annum. Of this equipment the fol-

lowing were received during the fiscal year:

10 freight locomotives,

10 passenger coaches,

122 flat cars.

During the year there were built at Portsmouth shops, and put into service, to re-

place trust equipment destroyed:

1 floating pile driver.

1 house barge.

SIDE-TRACKS.

32.71 miles of new sidings and extensions of existing sidings were constructed, and

there were deducted by removal and changes of old sidings 7.66 miles, making a net

increase over previous year of 25.05 miles.

No additions were made to sidings on leased lines, which remain the same as re-

ported last year, viz., 18.26 miles.

NEW RAIL.

129.68 miles of new 75-pound steel rail were laid in the main line track, releasing

therefrom 58, 60, 65, 70, 75, 80 and 85-pound worn rail, and there was charged net to

Operating Expenses \$66,046.02 and to Capital Account \$87,439.33.

BALLAST.

263.724 cubic yards of gravel and slag ballast were put under main line track at a

a cost of \$182,552.08, of which \$171,219.25 was charged to Capital Account and \$11,-

334.43 to Operating Expenses.

TRESTLES FILLED.

6,440 linear feet of wooden trestles were filled in, and of the total cost thereof,

including culverts, \$38,681.84 was charged to Operating Expenses.

The filling in of Lincoln-street trestle at Columbia, S. C., was commenced in April

this year, and of the approximate 185,000 yards necessary to complete the filling,

116,000 yards have been put in up to June 30.

BRIDGES.

Work has been done on 30 bridges, replacing with steel or strengthening the same

October 12, 1911.]

MANUFACTURERS RECORD.

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**SEVENTEENTH ANNUAL REPORT
OF THE SOUTHERN RAILWAY CO.**

YEAR ENDED JUNE 30, 1911.

Washington, D. C., September 29, 1911.

To the Stockholders of the Southern Railway Company:

The Board of Directors submits the following report of the affairs of the Company for the year ended June 30, 1911:

INCOME STATEMENT.

	1911.	1910.	Inc. or Dec. Dec. 8.22
Miles of road operated, average.....	7,041.35	7,050.17	
Gross operating revenues.....	\$60,345,062.64	\$57,294,508.34	Inc. \$3,050,554.30
Total operating expenses.....	40,926,390.08	38,635,745.94	Inc. 2,291,044.14
Net operating revenue.....	\$19,418,272.56	\$18,658,762.40	Inc. \$759,510.16
outside operations—net deficit.....	42,027.75	Cr. 18,380.36	Inc. 61,008.11
Net revenue.....	\$19,376,244.81	\$18,677,742.76	Inc. \$698,502.05
Taxes.....	2,212,967.87	2,027,104.25	Inc. 185,863.62
Operating income.....	\$17,163,276.94	\$16,650,638.41	Inc. \$512,638.53
Other income.....	3,282,529.36	3,227,927.98	Inc. 61,601.38
Total gross income.....	\$20,455,806.30	\$19,878,566.39	Inc. \$577,231.91
Reductions from income.....	2,660,946.36	2,759,069.41	Dec. 98,123.36
Total available income.....	\$17,794,860.25	\$17,119,496.98	Inc. \$675,363.27
Interest on mortgage, bonded and secured debt 11,124,856.76		11,362,478.37	Dec. 237,621.61
Balance of income over charges.....	\$6,670,003.49	\$5,757,018.61	Inc. \$912,984.88
Dividends on preferred stock: No. 21, 1 per cent., paid in April, 1911.....	\$600,000.00		Inc. \$600,000.00
Reserve for dividend No. 22, 1 per cent., payable in October, 1911.....	600,000.00		Inc. 600,000.00
Total dividends.....	\$1,200,000.00		Inc. \$1,200,000.00
Balance over dividends on preferred stock.....	\$5,470,003.49	\$5,757,018.61	Dec. \$287,915.12
Additions and betterments.....	66,045.71	52,372.91	Inc. 13,672.80
Balance carried to credit of Profit and Loss.....	\$5,403,957.78	\$5,704,645.70	Dec. \$300,687.92

DISCOUNT ON SECURITIES.

As of June 30, 1910, there remained a balance of discount on securities sold amounting to \$15,144.57. There accrued during the year \$35,700 as discount on Equipment Trust Obligations issued, and \$75,000 as premium on First Consolidated Mortgage Bonds sold, leaving a net balance of \$4,813,844.57. Following the general practice of the Company, there was charged during the year to Income \$125,814.78, and to Profit and Loss \$3,000,000, leaving a balance on June 30, 1911, of \$1,688,029.79 to be charged to Income in subsequent years during the life of the securities, or, at the option of the Company, to Profit and Loss.

INTEREST.

The accrued Interest on the Funded Debt of the Company for the year was \$302,504.19 less than for the previous year, while the accrued interest on Equipment Trust Obligations was \$64,882.58 greater, thus making the total interest on Funded Debt and Equipment Trust Obligations \$27,621.61 less than for the previous year. (See Table II, page 22 pamphlet report.)

DIVIDENDS.

The financial condition of the Company having so improved as to make such action entirely consistent with a sound and conservative policy, a Dividend of One Per Cent. on the Preferred Stock of the Company was declared and paid in April, 1911, and provision has been made for the payment in October of a similar Dividend out of Net Income earned during the year. It was considered that, as a fair recognition, under all the circumstances, of the just expectations of the holders of its Preferred Stock who had received dividends for a series of years until the conditions which culminated in the financial panic in the fall of 1907 and the subsequent business depression necessitated their suspension, a reasonable proportion of the Company's cash resources could properly be devoted to the payment of dividends. It is the expectation of the Board of Directors that, with a continuance of favorable conditions, the rate of dividend may gradually be increased until the full dividend can again be properly paid.

PROFIT AND LOSS.

The surplus as shown by the Profit and Loss statement as of June 30, 1910, was \$8,685.93, while the surplus as of June 30, 1911, after, as hereinbefore stated, charging to the account \$3,000,000 for Discount on Securities, amounted to \$11,445,965.08, a gain of \$2,760.9617 over the previous year. (See Table III, page 23, pamphlet report.)

PROPERTY INVESTMENT AND MORTGAGE DEBT.

The investment in physical property, exclusive of depreciation, has been increased \$35,576.55, of which \$2,554,642.66 was in Road and \$5,020,833.89 in Equipment. This increase represents net additions made during the year. (See pages 26 and 27, pamphlet report.)

The Mortgage, Bonded and Secured Debt increased during the year \$5,369,300, consisting of increases in Mortgage and Collateral Trust Bonds \$6,153,300, and a decrease in Equipment Trust Obligations amounting to \$784,000. (See pages 28, 29 and 30, pamphlet report.)

There were retired during the year at maturity \$500,000 Charlotte, Columbia and Augusta Railroad Company Second Mortgage Seven Per Cent. Bonds and \$500,000 Richmond, York River and Chesapeake Railroad Company Second Mortgage Four and One-Half Per Cent. Bonds, and through the provisions of Sinking Funds \$27,700 Charlottesville and Rapidan Railroad Company First Mortgage Six Per Cent. Bonds and \$500,000 Franklin and Pittsylvania Railroad Company First Mortgage Six Per Cent. Bonds. All of these bonds were redeemed by the Company with Treasury Funds, and there were issued and placed in the Treasury to represent such disbursements an equal amount of First Consolidated Mortgage Five Per Cent. Bonds.

There were also retired at maturity during the year \$1,580,000 Virginia Midland Railway Company Serial Mortgage Six Per Cent. Bonds, Series B, to retire which \$1,500,000 First Consolidated Mortgage Five Per Cent. Bonds free in the Treasury were sold. Subsequently, as provided for in the First Consolidated Mortgage, \$1,580,000 First Consolidated Mortgage Five Per Cent. Bonds were issued and placed in the Treasury.

By reason of these drawings the total amount of First Consolidated Mortgage Five Per Cent. Bonds free in the Treasury as of June 30, 1911, amounted to \$2,392,800.

On February 21, 1911, there were drawn and taken into the Treasury \$5,000,000 Development and General Mortgage Four Per Cent. Bonds, which, under the terms of that mortgage, could be so drawn during the calendar year 1911 to reimburse the Treasury for its advances made for additions and betterments. In like manner there were drawn and taken into the Treasury during the fiscal year \$1,131,000 Development and General Mortgage Four Per Cent. Bonds to reimburse the Treasury for the proportion of equipment obligations paid during the year which was charged to capital account.

By reason of these drawings the total amount of Development and General Mortgage Bonds free in the Treasury as of June 30, 1911, was \$13,667,000.

The Company has thus been able to conserve its Working Assets through the conservative, but progressive, employment of its Treasury funds.

ADDITIONS AND BETTERMENTS.

During the year the Company's new double-track line through Lynchburg, Va., was completed and put into service, giving a shorter line, without grade crossings and with substantial reduction in grades and curvature, thus avoiding congestion, promoting regularity and safety of train movement and effecting economies in operation. The completion of this work through Lynchburg, together with the construction of a mile and a half of double-track south from Franklin Junction, Va., to connect with about five miles of double-track already constructed from Whittle, Va., north—a gap of five miles between Sycamore and Franklin Junction, Va., being operated as a single-track gauntlet—gives the Company practically the equivalent of fifty miles of double-track between Monroe and Whittle, Va.

The new double-track line through the traffic funnel between Clifton and Olde Towne Junction, Tenn., referred to in previous annual reports, has been completed and placed in service since the close of the fiscal year, resulting in substantial gains in efficiency and economy of operation.

During the year the Company has pursued the policy of constructing lap-sidings to facilitate train movement at points where traffic is heavy but does not yet require double-tracking, these sidings being so arranged that they can be used as parts of a double-track line if the business shall require its construction. Thirteen of these lap-sidings are being constructed at points between Atlanta and Macon, Ga., eight between Knoxville and Chattanooga, Tenn., and three between Morristown, Tenn., and Asheville, N. C.; the aggregate length of which will be 28.4 miles.

Since the close of the year work has been commenced on thirty-eight miles of double-track north of Atlanta, between Crosskeys and Gainesville, Ga., which, in connection with six miles of existing double-track from Atlanta to Armour, Ga., and by the operation of two five-mile gaps as single-track gauntlets in a double-track system, will give practically the

equivalent of fifty-four miles of double-track north from Atlanta to Gainesville, greatly facilitating the movement of traffic on that important part of the Company's lines.

The Company has also undertaken the completion of its Knoxville, Tenn., Belt Line River Front Extension by the construction of about seven miles of track, which will provide transportation facilities to the marble quarries along and adjacent to the Tennessee River, and will also provide track facilities for further industrial development in that vicinity.

The construction of a new inbound freight station of modern type at Atlanta, Ga., has been undertaken, and is expected to be completed early in 1912. The upper floors of this building will provide office accommodations for the Company's forces at that point.

The Company is constructing additional yard facilities at Macon, Ga.; and, in connection with the Georgia Southern & Florida Railway Company, additional freight station and platform facilities are being provided at that point.

In connection with the Mobile & Ohio Railroad Company, the Company is constructing additional wharf facilities at Mobile, Ala., upon adjoining river frontage owned by the two companies. This improvement, consisting of a wharf and two-story warehouse, is necessary for the proper handling and storage of existing Cuban traffic and traffic to and from South America which it is expected will follow the establishment of regular steamship service to and from South American ports.

During the two years ended June 30, 1911, the Company has acquired and contracted for 198 locomotives, 203 passenger-train cars, 527 freight-train cars and 11 pieces of road service equipment, all of modern type and standard capacity. In addition, 1,000 gondola cars, which had passed the stage of economical operation, were converted into 900 steel underframe ventilated box cars and 200 refrigerator cars at the Company's car works at Lenoir City, Tenn.

TERMINALS AT LOUISVILLE, KY.

During the year the Kentucky and Indiana Terminal Railroad Company, the entire capital stock of which is owned in equal parts by this Company, The Baltimore & Ohio Railroad Company and the Chicago, Indianapolis & Louisville Railway Company, made provision for the refunding of its entire outstanding funded debt and for the construction of a new double-track bridge across the Ohio River between Louisville, Ky., and New Albany, Ind., the double-tracking of its Belt Line, and the improvement and enlargement of its terminal facilities in Louisville, Ky.

For these purposes, it issued El.231,000 (approximately \$5,900,784.60) First Mortgage Four and One-Half Per Cent. Fifty-Year Gold Bonds, due January 1, 1961. These bonds are guaranteed, jointly and severally, as to principle and interest, by this Company, The Baltimore & Ohio Railroad Company and the Chicago, Indianapolis & Louisville Railway Company, which companies have, by contract, agreed to use, during the life of the bonds, the bridge and terminal facilities of the Kentucky & Indiana Terminal Railroad Company for all their traffic in Louisville and crossing the Ohio River at Louisville.

LABOR CONDITIONS.

All questions as to wages and conditions of employment which have arisen during the year between the Company and its employees have been amicably adjusted. In some cases settlements were reached through mediation under the National Law commonly known as the Erdman Act. It is proper, in this connection, that recognition should be expressed of the conservative value of the Erdman Act as affording a means for the settlement of controversies between railway companies and their employees.

It is noteworthy that, in the settlement of the recent railway strike in England, through the medium of a special governmental commission, the government gave an assurance to the railway companies that it would propose legislation in the next session of Parliament providing that an increase in the cost of labor due to the improvement of conditions for the employees would be a valid justification for a reasonable general increase of charges within the legal maxima established under the Act of 1894.

Another illustration of this same tendency was a statement of the Judge of the Australian Court of Arbitration, acting under the compulsory arbitration law of Australia, in settling a controversy as to industrial wages. He said that he could not dictate to the employers what work they should carry on, but he could and would prescribe the conditions under which they must employ men if they chose to employ them; and that if any industry could not afford to pay the "living wage" which the Court awarded, its remedy was to apply to the Federal Parliament for protective duties that would allow it to comply with the award.

PROGRESS OF THE SOUTH IN ITS RELATION TO THE COMPANY.

One of the most important factors in the strength of the Company's position is the progressive industrial and agricultural development of the territory traversed by its lines.

The growth of communities served by the Company's lines may be measured by the United States Census reports of population of all Southern Railway Stations of sufficient importance to be returned separately in 1890, 1900 and 1910. The figures for 1910 show a growth in the aggregate population of these places of 34.2 per cent. in the ten years since 1900, and of 25.3 per cent. in the twenty years since 1890.

The percentages of increase for Southern railway stations, so far as reported separately by the Census Bureau, compare with the percentages of increase for the Southeastern States named as follows:

	1910-1900.	1910-1890.		1910-1900.	1910-1890.
Virginia.	42.2	62.8	Alabama.	83.2	144.3
Southern Rwy. stations..	11.2	24.4	Entire State.....	16.9	41.2
Entire State.....					
North Carolina.	60.5	185.4	Mississippi.	47.9	127.6
Southern Rwy. stations..	16.5	36.3	Entire State.....	15.8	39.3
Entire State.....					
South Carolina.	25.4	72.5	Tennessee.	34.7	90.1
Southern Rwy. stations..	13.1	31.6	Entire State.....	8.1	23.6
Entire State.....					
Georgia.	43.3	82.3	Kentucky.	13.6	46.2
Southern Rwy. stations..	17.4	42.0	Entire State.....	6.6	25.0
Entire State.....					

A diversified industrial development, based on the foundation of the manufacture of Southern raw materials, is in progress. This development is passing beyond the stage of advancing raw materials through the primary processes of manufacture, and is characterized, to an increasing degree, by the establishment of industries devoted to the conversion of the products of primary manufacturing into articles ready for the final consumers. A notable illustration of this is the multiplication of furniture factories and other wood-working establishments which use as their raw material the products of the lumber mills of the South. The same tendency is seen in the establishment of plants which draw their raw materials from Southern iron and steel mills, cotton mills and other primary manufacturing industries. The United States Census reports on manufactures in 1900, as compared with 1904, show an increase of 40 per cent. in the annual value of manufactures in the Southeastern States traversed by the Company's lines. A large proportion of this industrial development has been contiguous to the lines of the Company.

This development during the year ended June 30, 1911, included the completion of 379 industrial plants and additions to 141 existing plants. At the close of the year there were 62 plants under construction. The plants completed during the year included 34 textile mills, 70 lumber mills, 11 furniture factories, 20 other woodworking plants, 24 iron industries, 12 cottonseed-oil mills, 13 fertilizer works, 29 flour and feed mills, 29 stone quarries, coal and other mines, 19 brick works and 118 miscellaneous plants.

With climatic and soil advantages unsurpassed by those of any other part of the United States, the farmers of the Southeastern States are taking up the most approved methods of agriculture with intelligence and zeal. The success with which they are doing this is attested by the statistics of the United States Department of Agriculture, which show increasing yields per acre in each State traversed by the Company's lines.

A table published by the United States Department of Agriculture giving the total value for each State of the farm crops reported on by the department in comparison with the census figures for 1890, shows that in the Southeastern States traversed by the Company's lines there was an increase in the annual value of these crops in the eleven years from \$485,481,000 to \$1,042,614,000, or 115 per cent. For all of the other States, including the newer Western States, where the growth has been rapid, the increase in the same period amounted to 73 per cent., and for the States north of the Ohio and Potomac rivers and east of the Mississippi to 60 per cent.

The agricultural development in the territory contiguous to the Company's lines is due in part to increased average yields per acre, and partly to the more general practice of diversified farming. One-crop farming, even in the region most favorable to cotton production, is becoming much less common. Southeastern farmers are making record yields of corn and other grains; they are devoting more attention to live stock and dairying, and are growing more fruits and vegetables. There are localities along the Company's lines in Virginia, North Carolina and other States which are unsurpassed by any other region in the United States for the growing of apples. Orchards produce abundantly, the flavor of the fruit is particularly fine, and this industry is rapidly growing.

The management of the Company, with, as it thinks, a broad conception of its relations to the public, aims to make the railway not merely a carrier of the people and the products of the South, but also a helpful factor in Southern development. With that end in view it is carrying out a carefully considered policy of development work which has for its objects, primarily, the increase of the prosperity of the people already living in its territory, and, secondarily, the location along its lines of those from other regions who are seeking industrial and agricultural opportunities.

As the cotton plant is of such great economic importance to the people of the Southeast as a whole, and as important industries throughout the world, including the cotton mill and the cottonseed crushing industries along the Company's lines, are dependent upon it for their raw materials, the management of the Company felt that an obligation rested upon it to aid the growers of cotton along its lines to meet the new problem which was presented by the appearance of the Mexican cotton boll-weevil in a restricted region east of the Mississippi River in the season of 1910.

This insect made its appearance in Texas about 1892, and has gradually spread to the eastward. In the States west of the Mississippi River the appearance of the weevil has generally been followed by a series of short crops until the farmers have learned that by the adoption of improved cultural methods they can grow as much cotton per acre as before the insect arrived, and in some cases more. Profiting by this experience, in the fall of 1910 the Company, in conjunction with the Mobile & Ohio Railroad Company, the Alabama Great Southern Railroad Company and the Southern Railway Company in Mississippi, organized a Cotton Culture Department, with a General Agent and seven field agents, each one of whom has had practical experience in the growing of cotton under boll-weevil conditions. It is the duty of these agents to visit the farmers in their fields and give them practical advice as to growing cotton by those methods by which farmers in boll-weevil territory have recovered their losses and increased their production. This service is free to all farmers along our lines desiring to avail themselves of it. Through this means cotton growers in localities to which the weevil may spread are put in readiness for the coming of the insect, so that they will not have to learn how to deal with it after it appears, at the cost of short crops, but will be able to maintain their production from the start. The value of the work of the Cotton Culture Department is much increased by the fact that the cultural methods being taught and which must be adopted when the weevil appears are identically those by which the yield of cotton per acre may be increased where the weevil is not present. It is believed that as a result of the work of this Department, in co-operation with the United States Department of Agriculture and State authorities, the weevil will do relatively little damage if it shall spread to territory along the Company's lines. The results attained by the Company's Cotton Culture Department have been sufficiently satisfactory to warrant an increase in the force of field agents, and the work of the Department will be extended farther to the eastward so as to cover all of the territory along the Company's lines to which there is even a remote danger that the weevil may spread within the next several years.

It is interesting to note that, with governmental encouragement and the active support of European spinners, efforts are being made to increase cotton production in other parts of the world. A recent illustration of this was the publication of a letter from the British Foreign Office to the British Cotton Growing Association, stating that the first step for encouraging the further cultivation of cotton in the Anglo-Egyptian Sudan had been taken "by putting down a plantation of several thousand acres, to test all conditions of which full knowledge is necessary before any scheme for a larger development can be undertaken." It is also reported that the possibilities of increasing cotton production in British East Africa are being looked into, and that improved transportation in Uganda is expected to be followed by increased production in that region. The French Government, for five years past, has annually placed a sum of money at the disposal of the Ministry of the Colonies for the purpose of promoting cotton-growing in the French Colonies.

The cotton-producing States of the United States now possess a substantial monopoly in the production of cotton, giving them an advantage such as is enjoyed by no other region in the world. It is gratifying to be able to state that the statistics of the United States Department of Agriculture, covering the period from 1866 to 1910, show that the average yield of cotton per acre in each of the cotton-producing States traversed by the lines of this Company has been greater in the last ten years than in any preceding ten-year period. In view of this increase under normal conditions, and as the boll-weevil is not a menace to the supremacy of the southern part of the United States in cotton production, for the reason that successful and profitable growing of cotton under boll-weevil conditions is a matter of the adoption of improved cultural methods, we may expect still larger yields per acre; and, notwithstanding the efforts being made to expand the industry in other countries, there should be no difficulty in the American planter keeping pace with the growing demand of the world and maintaining the great advantage which he now possesses.

The management of the Company, recognizing that the cutting up of the great cattle ranges of the West into farms will make the consumers of meat products in the United States dependent upon farm-grown meats for a larger proportion of their supply, and having in view the constant increase in the demand for meats and dairy products in the South and in the densely populated area along the North Atlantic seaboard, is making special efforts to encourage the development of live stock raising and dairying in its territory.

It is proper that recognition should be made of the valuable assistance rendered by the newspapers published in the cities and towns along the Company's lines and by commercial organizations, banks and individuals who have aided the Company in all its efforts to advance the agricultural prosperity of the Southeast. Highly effective work is being done along this line by the United States Department of Agriculture, the Agricultural Commissioners of the several States and the State Agricultural Colleges. The Company is working in harmony with all of these agencies, and special acknowledgement should be made of the

cordial spirit with which they have welcomed its assistance and of their uniformly helpful co-operation.

THE SERVICE OF EMPLOYEES.

It is gratifying to the Board of Directors to be able to report that the service of officers and employees in all departments has been characterized during the year by loyalty to the interests of the Company. The standard of efficiency throughout the service is sufficient to justify the management in pursuing a consistent policy of filling, by promotion, vacancies that may occur, thus preserving a wide field of opportunity for advancement for all loyal and efficient employees.

Statements of the accounts and statistics of the Company in the usual detail will be found in the tables hereto annexed.

The accounts have been examined, as usual, by Certified Public Accountants, Messrs. Patterson, Teele & Dennis, and their certificate is made a part of this report.

Respectfully submitted, by order of the Board,

W. W. FINLEY,
President.

PATTERSON, TEELE & DENNIS,
Certified Public Accountants,
New York and Boston.

30 Broad Street, New York, September 1, 1911.

To the Stockholders and Bondholders of the Southern Railway Company:

We have made an examination of the books and accounts of the Southern Railway Company for the fiscal year ending June 30, 1911, and have verified the Balance Sheet and Income and Profit and Loss Accounts published herewith.

The amount charged to Capital Accounts for expenditures during the year is, in our opinion, proper.

The securities owned have either been produced or we have obtained certificates from the various Trustees or Depositories holding the securities.

The valuation of the equipment in the Balance Sheet is fully borne out by the rolling stock on hand and the provisions made for replacement.

The method of arriving at the valuation placed upon the material and supplies on hand has been carefully examined, and the results reached in former inventories justify the present valuation.

The amounts due to the Company from the various sources cited in the Balance Sheet are believed to be collectible, due provision having been made in the reserves for such as are of doubtful realization.

Cash has either been counted or certificates obtained from the Depositories.

All known liabilities have been stated, and sufficient reserves exist for such as have not yet been determined.

The charges against the year's income for the Maintenance of Way and Structures and Equipment have been, in our opinion, sufficient for the upkeep of the capital.

Respectfully submitted,

PATTERSON, TEELE & DENNIS,
Certified Public Accountants,

TABLE 3.—PROFIT AND LOSS FOR YEAR ENDED JUNE 30, 1911.

Balance at Credit of this Account June 30, 1910.	\$8,65,595 51
Add:	
Credit Balance of Income for the Year.	5,46,357 78
Net Miscellaneous Credits.	356,947 29
Deduct:	
Discount on Securities charged off during the year.	3,90,900 00
Credit Balance June 30, 1911.	\$11,45,595 08

TABLE 1.

INCOME STATEMENT FOR YEAR ENDED JUNE 30, 1911, COMPARED WITH YEAR ENDED JUNE 30, 1910.

1910.	1911.
Operating Revenues:	
Freight Revenue.....	\$39,498,262 61
Passenger Revenue.....	16,056,303 76
Miscellaneous Passenger Train Revenue.....	292,100 46
Mail Revenue.....	1,370,741 78
Express Revenue.....	1,816,970 04
Other Transportation Revenue.....	891,164 43
Revenue from Operations other than Transportation.....	418,818 56
Total Operating Revenues.....	860,345,962 64
Operating Expenses:	
Maintenance of Way and Structures.....	\$7,464,916 42
Maintenance of Equipment.....	9,460,756 71
Traffic Expenses.....	1,549,403 98
Transportation Expenses.....	20,662,085 84
General Expenses.....	1,789,627 10
Total Operating Expenses.....	40,926,750 08
Net Operating Revenue.....	\$19,418,272 56
Outside Operations—Net Revenue.....	.....
Outside Operations—Net Deficit.....	42,027 75
Net Revenue.....	\$19,376,244 81
Taxes.....	2,212,967 87
Operating Income.....	\$17,163,276 94
Other Income:	
Rents Accrued from Lease of Road.....	\$17,499 56
Hire of Equipment—Balance.....	137,342 87
Rents Accrued from Joint Tracks, Yards and Terminals.....	200,131 16
Miscellaneous Rents.....	148,970 63
Miscellaneous Income.....	194,268 92
Income from Investments.....	2,153,066 36
Miscellaneous Interest and Commissions.....	441,310 52
Total Other Income.....	3,292,529 36
Total Gross Income.....	\$20,455,806 20
Deductions from Total Gross Income:	
Income from Operation, Southern Railway Company in Mississippi, Alabama State Line to Columbus, Miss.....	\$34,440 49
Rents Accrued for Lease of Other Roads (see Table 2 of pamphlet report).....	1,381,505 00
Rents Accrued for Joint Tracks, Yards and Terminals.....	759,961 91
Miscellaneous Rents.....	60,017 72
Separately Operated Properties.....	176,396 39
Discount on Securities Sold—Proportion charged to Income.....	125,814 78
Miscellaneous Deductions.....	83,709 76
Total Deductions.....	2,669,946 05
\$17,119,496 98	
Total Available Income.....	\$17,574,860 25
Interest on Funded Debt (see Table 2 of pamphlet report).....	\$10,230,820 00
Interest on Equipment Trust Obligations (see Table 2 of pamphlet report).....	667,228 76
Dividends Accrued on Southern Railway—Mobile & Ohio Stock Trust Certificates.....	226,808 90
	11,121,856 78
\$5,757,018 61	
Balance of Income over Charges From which Deduct:	
Dividend No. 21 (1%) on Preferred Stock, paid in April, 1911.....	\$600,000 00
Reserve for Dividend No. 22 (1%) on Preferred Stock, payable in October, 1911.....	600,000 00
Total Dividends.....	1,200,000 00
\$5,757,018 61	
Balance over Dividends on Preferred Stock.....	
Additions and Betterments.....	55,470,001 49
\$5,704,645 70	
Balance Carried to Credit of Profit and Loss for the Year.....	\$5,403,557 78

TABLE 4.

GENERAL BALANCE SHEET, JUNE 30, 1911, AND JUNE 30, 1910.

June 30, 1910.	ASSETS.	June 30, 1911.
Property Investment:		
Road and Equipment:		
Investment to June 30, 1907:		
Road.....	\$318,243,507 64	47,796,465 54
Equipment (including Trust Equipment).....	47,796,465 54	47,796,465 54
Total Investment to June 30, 1907.....	\$366,039,973 18	\$366,039,973 18
Investment since June 30, 1907:		
Road.....	\$13,093,692 77	16,212,661 94
Equipment (including Trust Equipment).....	23,306,360 71	389,346,333 89
Total Investment since June 30, 1907.....	32,400,053 48	12,650,132 83
Total Road and Equipment.....	\$377,296,201 06	\$386,921,210 44
Less: Reserve for Accrued Depreciation on Equipment.....		12,912,296 92
Total Net Road and Equipment.....		\$384,008,913 52

October 12, 1911.]

MANUFACTURERS RECORD.

GENERAL BALANCE SHEET, JUNE 30, 1911, AND JUNE 30, 1910.—Continued.							June 30, 1911.
Securities:							
Securities of Proprietary, Affiliated and Controlled Companies—Pledged:							\$2,487,686 26
Stocks							21,502,921 74
Bonds							\$23,990,608 00
Bonds Issued or Assumed—Pledged:							2,000,000 00
Securities of Proprietary, Affiliated and Controlled Companies—Unpledged:							
Stocks							\$125,886 21
Bonds							673,419 75
Total							799,305 96
\$27,099,511 15							\$26,789,913 96
\$335,656 89							
Other Investments:							
Advances to Proprietary, Affiliated and Controlled Companies for Construction, Equipment and Betterments							\$589,749 37
Miscellaneous Investments:							
Physical Property							\$374,587 76
Securities—Pledged							36,189,186 93
Securities—Unpledged							3,598,039 18
Total							46,161,813 87
\$46,376,166 97							\$46,751,563 24
Working Assets:							
Cash							\$10,377,361 16
Securities Issued or Assumed—Held in Treasury							16,101,893 00
Marketable Securities:							
Stocks							\$26,522 00
Bonds							179,059 04
Miscellaneous							53,155 09
Total							480,536 04
45,491 54							137,128 77
424,737 95							73,188 78
752,865 97							415,424 63
450,223 46							2,961,861 71
2,340,580 92							3,837,425 42
4,215,870 11							368,991 90
524,788 68							
Other Working Assets							
\$27,858,513 49							\$35,422,412 41
Total							
\$597,069 51							\$938,693 31
Accrued Income Not Due:							
Unmatured Interest, Dividends and Rents Receivable							
Deferred Debit Items:							
Temporary Advances to Proprietary, Affiliated and Controlled Companies							\$745,771 25
Working Funds							22,494 24
Other Advances							1,013,332 37
Rents and Insurance Paid in Advance							2,318 43
Taxes Paid in Advance							23,528 45
Extinguished Discounts on Securities							1,688,029 79
Special Deposits							1,815,598 46
Cash and Securities in Sinking and Redemption Funds							31,380 58
Cash and Securities in Insurance Reserve Fund							804,390 12
Other Deferred Debit Items							1,569,663 48
Total							\$7,716,857 17
\$493,972,031 41							\$501,628,353 61
Grand Total							
Capital Stock:							
Common							\$120,000,000 00
Preferred							60,000,000 00
Total							\$180,000,000 00
Mortgage, Bonded and Secured Debt:							
Funded Debt:							
Mortgage Bonds—Outstanding							\$193,986,300 00
Mortgage Bonds—Held by Company							18,302,800 00
Total							\$212,296,100 00
Collateral Trust Bonds—Outstanding							
Collateral Trust Bonds—Held by Company							42,000 00
Total							19,724,700 00
Notes—Outstanding							10,107,000 00
Total (see Table 5 of pamphlet report)							\$242,127,800 00
Equipment Trust Obligations (see Table 6 of pamphlet report)							17,389,000 00
Total							\$259,516,800 00
Outstanding Securities on Leasehold Estates							33,099,000 00
Working Liabilities:							
Loans and Bills Payable							\$470,339 36
Traffic and Car Service Balances due to other Companies							82,448 48
Audited Vouchers, Accounts and Wages Unpaid							4,861,646 68
Miscellaneous Accounts Payable							207,897 90
Matured Interest, Dividends and Rents Unpaid, including amounts due July 1							2,876,213 70
Matured Mortgage, Bonded and Secured Debt unpaid—Bonds not presented for Redemption							29,300 00
Other Working Liabilities							956,775 13
Total							10,231,621 25
Accrued Liabilities Not Due:							
Unmatured Interest and Rents Payable							\$1,712,654 50
Taxes							902,467 67
Total							2,623,422 17
Deferred Credit Items:							
Operating Reserves							\$2,245,362 71
Other Deferred Credit Items							742,381 11
Total							2,987,713 82
Appropriated Surplus:							
Reserve for 1/4 Dividend on Preferred Stock, payable October, 1911							\$600,000 00
Additions to Property since June 30, 1907, through Income							319,411 17
Insurance Reserve Fund							804,390 12
Total							1,727,801 29
\$57,976 02							11,445,965 08
8,685,959 91							
Profit and Loss							
\$493,972,031 41							\$501,628,353 61
Grand Total							

TABLE 20.—OPERATING STATISTICS FOR YEARS ENDED JUNE 30, 1911, AND 1910.

Mileage:	1911.	1910.	Ine.	Dec.	Dec.	Per cent. of Inc. of
Miles of main line of road in operation on June 30	7,038,64	7,050,17	.....	11,53	.16	
Average miles of lines operated during year	7,041,35	7,050,17	.....	8,22	.12	
Average miles of lines maintained during year	6,572,91	6,580,44	.....	7,53	.11	
Maintenance of Way and Structures:						
Total charges	\$7,461,916 42	\$6,635,724 58	\$829,191 84	.....	12.50	
Ratio to operating revenues .....</td						

(Continued from page 75.)
TABLE 16.—TRAFFIC STATISTICS FOR YEARS ENDED JUNE 30, 1911, AND 1910.

	1911.	1910.	Per Cent. of Inc. or Dec.
Average miles of road operated.....	7,041.95	7,050.17	Decrease .12
Passenger Traffic:			
Number of passengers carried.....	17,137,450	15,694,486	Increase 9.19
Number of passengers carried one mile.....	740,111,290	671,732,143	Increase 19.22
Average distance hauled per passenger (miles).....	43.20	42.80	Increase .92
Total revenue from passengers.....	\$ 16,056,303.76	\$ 14,639,160.76	Increase 9.68
Average receipts per passenger per mile (cents).....	2.169	2.179	Decrease .46
Total passenger-train revenue.....	\$ 19,536,116.04	\$ 17,913,963.52	Increase 9.06
Passenger-train revenue per mile of road.....	\$ 2.774.25	\$ 2.540.93	Increase 9.38
Passenger-train revenue per train mile.....	\$ 1,181.46	\$ 1,148.43	Increase 3.88
Average number of passengers in each train.....	44.78	43.06	Increase 3.99
*Average number of passengers in each car.....	13.57	13.42	Increase 1.12
Freight Traffic:			
Revenue Freight:			
Number of tons carried.....	26,691,661	25,294,297	Increase 3.52
Number of tons carried one mile.....	4,088,496,703	3,985,563,001	Increase 2.58
Average distance hauled per ton (miles).....	156.70	158.13	Decrease .90
Total freight-train revenue.....	\$ 39,498,963.61	\$ 38,161,301.93	Increase 3.51
Average receipts per ton per mile (cents).....	.936	.957	Increase .94
Freight-train revenue per mile of road.....	\$ 5,609.09	\$ 5,412.24	Increase 3.63
Freight-train revenue per train mile.....	\$ 2,223.52	\$ 2,273.08	Increase 2.19
Average number of tons of freight in each train.....	240.51	237.46	Increase 1.28
Average number of tons of freight in each loaded car.....	11.54	14.53	Increase .07
All Freight (Including Company's Material Hauled Free):			
Number of tons carried.....	31,688,281	30,183,906	Increase 3.90
Number of tons carried one mile.....	5,111,331,177	4,969,672,728	Increase 2.85
Average number of tons of freight in each train.....	300.67	296.40	Increase 1.54
Average number of tons of freight in each loaded car.....	18.17	18.12	Increase .28
Revenues and Operating Expenses:			
Passenger and freight-train revenue.....	\$ 59,035,079.65	\$ 56,075,355.45	Increase 5.28
Passenger and freight-train revenue per mile of road.....	\$ 8,383.34	\$ 7,953.76	Increase 5.40
Operating revenues.....	\$ 60,345,062.64	\$ 57,294,598.34	Increase 5.32
Operating revenues per mile of road.....	\$ 8,569.37	\$ 8,126.68	Increase 5.45
Operating revenues per revenue train mile.....	\$ 1,852.06	\$ 1,829.01	Increase 1.21
Operating expenses (taxes excluded).....	\$ 40,926,790.08	\$ 38,635,745.91	Increase 5.93
Operating expenses per mile of road.....	\$ 5,811.85	\$ 5,480.91	Increase 6.05
Operating expenses per revenue train mile.....	\$ 1,250.08	\$ 1,233.97	Increase 1.79
?Net operating revenue.....	\$ 19,115,272.56	\$ 18,658,762.40	Increase 4.07
Net operating revenue per mile of road.....	\$ 2,651.52	\$ 2,616.57	Increase 4.19
Net operating revenue per revenue train mile.....	\$ 0.59598	\$ 0.55594	Increase .91

*Includes sleeping, parlor and observation cars.

†Excludes outside operations.

[Continued from Page 68.]

R. Parham, L. R. Griffin, Burton B. Weill, C. G. Smith and John L. Pacham.

La., Shreveport.—The Louisiana Insurance Co., capital \$500,000, will, it is reported, begin business in Texas, Arkansas and Louisiana on January 1, 1912; W. T. Crawford of Shreveport, president; L. D. Prewitt, manager.

Miss., Burnsville.—Official: The First State Bank of Burnsville has advertised its charter; capital \$10,000. Incorporators: Gulf Barber, Erwin, Tenn.; J. H. Mixon and J. M. Woodruff, Burnsville, Miss. Business is to begin about December 1.

Miss., Chunky.—Official: Chartered: First State Bank of Chunky; capital \$10,000. Gulf Barber, Erwin, Tenn., is president, and Thomas Brand, cashier. Business is to begin in about 30 days.

Miss., Gulfport.—Reported approved: The Gulfport Investment Co.; capital \$30,000. Incorporators: S. F. Dupree, J. L. Taylor, L. F. Barnes and J. B. Howie of Gulfport, and D. J. Sutherland of Hattiesburg.

Miss., Jackson.—The South Continent Life Insurance Co., capital \$1,000,000. Directors: W. H. Ellsworth, president; J. W. Corry and George Robinson, vice-presidents; W. L. Wallace, secretary; A. J. Rogers, assistant secretary; George P. Hewes, treasurer; W. E. Clark, assistant treasurer; E. H. Hoffman, T. J. B. Kellier, T. V. Courtney, F. S. Hewes, Jr., R. E. Johnson, A. R. Miller, D. J. Williams, A. H. D'Alembert, J. A. Leathers and C. E. O'Brien. W. E. Clark is assistant treasurer.

Mo., Kansas City.—The Elinor Investment Co. of Kansas City, capital \$120,000, is reported incorporated by Levina M. Kellogg, S. P. Kellogg, Grace Elinor and others.

Mo., St. Louis.—The Caxton Investment Co. is reported incorporated with \$63,000 capital by M. D. Coffeen, Robert J. Kirkwood, James A. Rector and others.

Okla., Bartlesville.—Reported chartered: The Southern Loan & Investment Co.; capital \$25,000. Incorporators: L. A. Rowland, J. A. Talbot and James A. Vensey, all of Bartlesville.

Okla., Camargo.—The First National Bank, capital \$10,000, is reported incorporated by J. P. Thurmond, W. E. Hocker, R. J. Carlisle and A. L. Thurmond, all of Elk City; Phil S. Hocker, George E. Steele, J. W. Boatman and Tom Black, all of Camargo; Robert Adams, Taloga, and Charles McCloud, Oklahama City.

Okla., Hugo.—Reported chartered: The Hugo Building & Loan Co.; capital \$100,000. Incorporators: A. B. Gould, T. O. Nelson and J. J. Barrett, all of Hugo.

Okla., Valliuit.—Reported chartered: The Farmers' State Guaranty Bank; capital \$15,000; incorporators, R. S. Turner and Bertie Hernstein, Indianapolis, Okla., and William G. Megginson, Denison, Tex.

S. C., Bennettsville.—Official: The Mutual Trust Co. of Bennettsville chartered;

capital \$15,000. Business is to begin about October 15 with T. B. McLaurin, president; J. B. McLaurin, vice-president, and W. D. Smith, treasurer.

S. C., Camden.—The Loan & Trust Co. is reported to have begun business with officers thus: President, Capt. L. L. Clyburn; cashier, John S. Lindsay, and R. L. Perry, teller.

S. C., Silverstreet.—Reported chartered: The Farmers' Bank; capital \$20,000. H. O. Long, president; B. M. Hayard, vice-president; W. A. Asbill, cashier; Eugene S. Bleasie, solicitor.

S. C., Ridgeway.—Official: The Farmers and Merchants' Bank chartered; capital \$25,000; W. J. Johnson, president; Dr. J. W. Team, vice-president, and W. H. Ebrod, cashier; directors, T. W. Ruff, D. B. Bony, Earl H. Rower, R. A. Meares, R. H. Brown and W. H. Ebrod. Business began October 1.

Tenn., Soddy.—The Soddy Banking Co., capital \$10,000, is reported organized with C. W. Abel, president; T. H. McKown, vice-president; N. E. Cobleigh, James A. Roberts, W. L. Templeton, T. J. Welch, H. M. Bowling, directors; C. C. Jones, cashier. Business is expected to begin about December 1.

Tex., Bonita.—The First National Bank of Bonita is reported approved; capital \$25,000; directors, S. H. Camp, Bonita; F. A. McCall, J. R. Modrall and J. C. Howard.

Tex., Bonita.—Reported approved: The First National Bank of Bonita; capital \$25,000; organizers, S. H. Camp, Bonita; W. A. McCall, C. McCall, J. R. Modrall and J. C. Howard.

Tex., Fort Davis.—Official: The Fort Davis State Bank chartered; capital \$25,000; Chas. Mulhern, president; Dr. W. T. Jones, vice-president; G. F. Smalting, cashier; directors, Chas. Mulhern, Dr. W. T. Jones, J. W. Espy, W. S. Miller and F. H. Brown, Jr. Business is to begin in a few days.

Tex., Fort Stockton.—Reported chartered: The Stockton Building Association; capital \$16,500. Incorporators: James Rooney, H. H. Butz, W. R. Chancellor and others.

Tex., Jacksonville.—W. A. Mixon, formerly president of the First State Bank of Teague, will, it is reported, establish a State bank at Jacksonville.

Tex., Mercedes.—Official: The Planters' State Guaranty Bank chartered; capital \$15,000; directors, Thos. L. Jones, president; Wm. Lingenbrink, vice-president; E. P. Gregg, cashier; J. A. Champion, E. H. Kasey and J. G. Fernandez. Business began September 25.

Tex., Runge.—The First State Bank of Runge is reported incorporated with \$35,000 capital by William Heberer, P. W. Tom, W. E. Porter and others.

Va., Richmond.—Henry R. Pollard, Jr., confirms the report that a savings bank and trust company, capitalized at \$250,000, is being organized.

W. Va., Charleston.—Official: The John A.

Schelling Agency, authorized capital \$25,000, is incorporated with directors thus: John A. Schelling, president, Baltimore, Md.; Stuart A. Howard, vice-president, Lynchburg, Va.; Carroll M. Irving, secretary, Baltimore, Md.; Reid Fulman, assistant secretary and treasurer, Atlanta, Ga., and S. B. Avis, Charleston, W. Va.

W. Va., Glen Jean.—Official: The Winding Gulf Bank Incorporated; capital \$25,000; incorporators, John Faulkner, W. E. Deegans, L. N. Frantz, J. M. Herndon and John Hains. Business is to begin about November 1, 1911.

W. Va., Wheeling.—The Real Estate Savings Bank, authorized capital \$25,000, is reported incorporated by Richard Robertson, John H. Wells, Herman G. Weiske, Charles J. Wolf, Edmund M. Kirchner and Count L. Radcliffe, all of Wheeling.

W. Va., Wheeling.—Reported chartered: The Real Estate Savings Co., authorized capital \$200,000; incorporators, Richard Robertson, John H. Wells, Herman G. Weiske, Charles J. Wolf, Edmund M. Kirchner and Count L. Radcliffe.

NEW SECURITIES.

Ala., Alabama City.—The question of holding an election to vote on \$50,000 of water and light bonds is reported under consideration.

Ala., Anniston.—Reported that an election is to be held to vote on \$350,000 of Calhoun county road bonds.

Ala., Dothan.—The Houston National Bank is reported to have purchased \$70,000 of water and light plant bonds.

Ala., Greensboro.—Hale county will, it is reported, on February 6, 1912, vote on \$100,000 of road bonds.

Ala., Huntsville.—The election to vote on \$130,000 of bonds to pay off city's floating indebtedness is to be held November 6.

Ala., Marion.—Reported voted: \$10,000 of Perry county road bonds, and it is stated they will soon be placed on the market.

Ala., Montgomery.—Reported that an election is to be held to vote on \$100,000 of paving-improvement bonds.

Ala., Tuscaloosa.—October 22, it is reported, an election is to be held to vote on \$35,000 of 5 per cent. 30-year school bonds. S. H. Sprott, Jr., is president Board of City Commissioners.

Ark., Blytheville.—L. W. Thompson, St. Louis, Mo., purchased at \$97.75 the \$25,000 of 5% per cent. school building and furnishing bonds; denomination \$500; dated July 1, 1911; maturity, serial bonds \$1000 a year after the first two years. Address J. G. Sudbury, secretary School Board.

Ark., Texarkana.—Press dispatches state that \$300,000 of 6 per cent. 20-year bonds of Levee district No. 2, Miller county, have been purchased by the Texarkana Savings & Trust Co.

Ark., Texarkana.—Reported that on October 28 an election will be held to vote on \$75,000 of water bonds.

N. C., Apex.—An election is to be held in December to vote on \$10,000 of street, market and municipal building bonds.

N. C., Asheville.—Bids will be received until noon November 7. It is reported, by J. E. Swain, attorney of Buncombe county, for \$50,000 of 5 per cent. 20-year refunding bonds.

N. C., Beaufort.—Woodin, McNear & Moore, Chicago, are reported to have been awarded at \$1267 premium \$13,000 of 5 per cent. 50-year bonds issued to take up the floating debt.

N. C., Fayetteville.—Press dispatches state that the election called for November 6 to vote on Cumberland county good-roads bonds has been postponed until some time in the spring of 1912.

N. C., Halifax.—Official: An election is to be held in Halifax county November 14 to vote on \$300,000 of road bonds. W. R. Harvey is chairman Bond Commissioners.

N. C., Salisbury.—Official: The Wachovia Bank & Trust Co., Winston-Salem, N. C., purchased at par and accrued interest the \$50,000 of 5 per cent. 40-year funding and refunding bonds offered April 10, 1911; denomination \$1000; dated May 1, 1911; maturity May 1, 1951. Address F. M. Thompson, Mayor.

N. C., Shelby.—Reported that an election is to be held December 5 to vote on \$15,000 of electric-light plant bonds.

Ga., Savannah.—December 6, it is reported, an election is to be held to vote on \$600,000 of sewerage bonds.

Ky., Ludlow.—November 3, it is reported, an election is to be held to vote on \$15,000 of street and \$15,000 of sewer 4 per cent. bonds.

Ky., Paducah.—Reported that an election is to be held to vote on \$75,000 of school-building bonds. J. A. Carnagey is superintendent Board of Education.

Ky., Pineville.—Official: November 7, it is reported, an election is to be held to vote on \$30,000 of school-building and \$15,000 of street bonds. F. A. Heath is City Clerk.

La., Crowley.—Official: Cutler-May & Co., Chicago, have purchased \$75,000 of 5 per cent. 1-31-year bonds of Sixth Ward and Crowley Drainage District bonds offered July 8, 1911; denomination \$500. L. A. Williams is secretary of the district at Crowley.

La., Lake Charles.—An ordinance has been prepared providing for the issue and sale of \$100,000 of 5 per cent. 36-year street-paving bonds. C. B. Richard is Mayor and S. O. Shattuck City Clerk.

La., LeCompte.—Reported voted: \$28,000 of water-works bonds.

La., Morgan City.—November 7, it is reported, an election is to be held to vote on \$80,000 of 5 per cent. 40-year water-works bonds.

La., Roseland.—Reported voted: \$21,000 of water-works bonds.

Miss., East Side.—An election is to be held, it is reported, to vote on \$3000 of school bonds. J. B. U. Ruby is Mayor.

Miss., Valden.—Reported defeated: Water-works bonds.

Mo., Bowling Green.—Official: Ordinance providing for election to vote on water and sewer bonds did not pass City Council, R. R. Sandusky is Mayor.

Tex., Dallas.—Reported that all bids received October 2 for the \$250,000 of 4 per cent. 1-40-year school bonds were rejected. J. B. Winslett is City Secretary.

Mo., Kirkwood.—Reported defeated: \$90,000 of high-school building bonds. Another election will probably be held.

Mo., Savannah.—P. C. Breit, secretary Board of Education, will, it is reported, receive bids until 11 A. M. October 12 for \$20,000 of 5 per cent. school district building bonds; denomination \$1000; dated February 1, 1912; maturity, \$1000 February 1, 1913 to 1932.

Mo., St. Louis.—November 7, according to press dispatches, an election is to be held to vote on \$2,250,000 of municipal bridge bonds.

Mo., Unionville.—Official: H. C. Speer & Sons Company, Chicago, Ill., purchased at par, less \$75 for engraving bonds, the \$800 of 5% per cent. five-year Putnam county infirmary rebuilding bonds offered September 12; denomination \$500; dated September 12, 1911; maturity September 12, 1916. C. W. Mulliken is County Treasurer.

Mo., Webb City.—H. T. Holtz & Co., Chicago, are reported to have been awarded at \$233 premium \$13,000 of 5 per cent. 20-year funding bonds. L. O. Walker is City Clerk.

Mo., Webster Groves.—Reported that on October 28 an election will be held to vote on \$75,000 of water bonds.

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N. C., Shelby.—Reported that an election is to be held December 5 to vote on \$15,000 of electric-light plant bonds.

[For Additional Financial News, See Pages 76 and 77.]

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H. B. Wilcox, President. Blanchard Randall, V.-Pres.
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 R. E. Bolling, A. Cash. Raymond B. Cox, Auditor.

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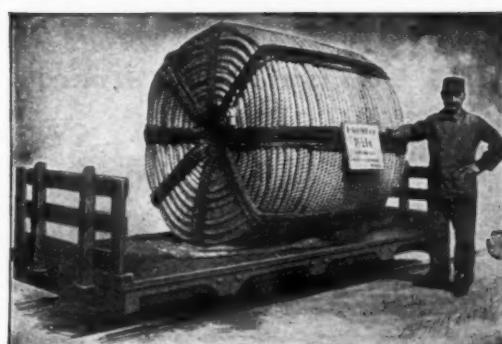
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OF BALTIMORE

Capital and Surplus, \$4,500,000

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MANUFACTURERS RECORD.

N. C., South Mills.—Reported that \$5000 of school bonds are to be issued.

N. C., Troy.—Reported voted: \$20,000 of school-building bonds. R. E. Ranson is superintendent of schools.

N. C., Troy.—An election is to be held in Montgomery county in January, it is reported, to vote on \$100,000 of road bonds.

N. C., Weldon.—An election is to be held in Halifax county November 14, it is reported, to vote on \$300,000 of good-roads bonds.

N. C., Wilson.—Official: Bids will be received until noon January 1 for \$74,000 of 5 per cent. 20-year refunding electric-light and water-works bonds. Address Theo. A. Hinman, clerk Board of Commissioners.

Oklahoma, Afton.—October 17, it is reported, an election is to be held to vote on \$20,000 of water-works and electric-light system bonds.

Oklahoma, Br'erstow.—Reported voted: \$10,000 of bonds to take up outstanding indebtedness and \$5000 for water extension.

Oklahoma, Collinsville.—Official: C. A. Rees, Collinsville, Okla., purchased on September 18 the \$45,000 of 6 per cent. 25-year light and power plant construction bonds voted August 29; denomination \$1000; dated September 1, 1911; maturity September 1, 1936. Address Board of Trustees. Wm. M. Gresham is Town Clerk.

Oklahoma, Duncan.—October 31 an election is to be held to vote on \$65,000 of courthouse and jail and \$60,000 of bridge 5 per cent. 20-25-year Stephens county bonds; denomination \$1000. R. J. Edwards of Oklahoma City, Okla., will take the bonds.

Oklahoma, Durant.—Official: W. S. Shannon, City Clerk, will receive bids until 8 P. M. October 17 for \$10,000 of 6 per cent. 20-year bridge bonds; denomination \$1000; dated October 1, 1911; maturity, October 1, 1931.

Oklahoma, Guthrie.—Official: E. H. Winslow, City Clerk, denies the report that the \$147,900 of 6 per cent. 25-year viaduct and park improvement bonds have been sold. Bonds are dated June 1, 1911; maturity June 1, 1936; denomination \$1000.

Oklahoma, Hobart.—Official: The Greer Bond & Investment Co., Mangum, Okla., purchased the \$30,000 of water, \$20,000 of park and \$50,000 of jail 5½ per cent. 25-year bonds voted August 15; denomination \$1000.

Oklahoma, Marietta.—October 16 bids will be opened by the County Commissioners for \$74,000 of road improvement and \$26,000 of bridge 5 per cent. 25-year Love county bonds. John L. Pittman is County Clerk.

Oklahoma, Muldrow.—Bids will be received until 7 P. M. October 10 for \$26,000 of water-works and \$7000 of electric-light 6 per cent. 25-year bonds. E. A. Miller is clerk.

Oklahoma, Pawhuska.—Reported that the election to vote on \$100,000 of Osage county courthouse and jail bonds is to be held November 8.

Oklahoma, Ponca.—October 31, it is reported, an election is to be held to vote on \$30,000 of electric-light bonds.

Oklahoma, Tallihina.—October 19, it is reported, an election is to be held to vote on \$25,000 of water-works bonds.

Oklahoma, Westville.—Reported voted: \$20,500 of water-works bonds.

S. C., Aiken.—C. H. Coffin, Chicago, is reported to have been awarded, at \$24 premium, \$8000 of 6 per cent. 10-year Aiken county school district building bonds.

S. C., Cartersville.—Bids will be received until October 20 for \$6000 of 6 per cent. bonds of Cartersville school district No. 38, Florence county; denomination \$500. Address W. C. McDaniel, J. H. Peeler and J. Monroe Hill, Board of Trustees.

S. C., Charleston.—Official: Of the \$400,000 of 4 per cent. 20-year sewerage bonds authorized, \$375,000 have been sold at par. The bonds are dated April 1, 1909; maturity April 1, 1929. Address City Treasurer. R. G. Rhett is Mayor.

Tenn., Chattanooga.—According to press dispatches, the City Water Co. has filed a mortgage to provide for the immediate issuance

of \$2,271,000 of 5 per cent. bonds to refund present indebtedness and the future issuing of \$1,729,000 of 5 per cent. bonds.

Tenn., Covington.—Reported defeated: \$300,000 of Tipton county road bonds.

Tenn., Dayton.—Official: Bids will be received until 2 P. M. October 23 for \$25,000 of 5 per cent. 30-year water-works bonds. Address Euclid Waterhouse, secretary-treasurer. C. D. Sanborn is Mayor.

Tenn., Decaturville.—November 25, it is reported, an election is to be held in Decatur county to vote on not exceeding \$100,000 of road bonds.

Tenn., Elizabethton.—Official: H. C. Speers & Sons, Chicago, have purchased at \$620 premium \$60,000 of 5 per cent. 30-year Carter county road bonds; denomination \$500; dated October 1, 1911.

Tenn., Jonesboro.—Reported voted: \$50,000 of Washington county courthouse bonds.

Tenn., Johnson City.—The Washington County Court is reported to have authorized the issuing of \$50,000 of courthouse and \$60,000 of highway bonds.

Tenn., Loudon.—The County Court of Loudon County is reported to have authorized the issuing and sale of \$25,000 of highway bonds.

Tenn., Madisonville.—The Monroe County Court is reported to have authorized the issuing of \$300,000 of road bonds.

Tenn., Nashville.—The \$65,000 of 6 per cent. 30-year Nash county township road bonds are reported being offered.

Tenn., Newport.—Official: Bids will be received until 2 P. M. October 28 for \$100,000 of 5 per cent. Cocke county road bonds; denomination \$1000; dated January 1, 1912. Address: Geo. W. Gorrell, secretary Cocke County Pike Commission.

Tenn., Pulaski.—The First National Bank of Nashville is reported to have purchased \$20,000 of 5 per cent. 20-year electric-light bonds at \$100 premium.

Tenn., Selmer.—An election is to be held in McNairy county November 21, it is reported, to vote on \$100,000 of highway bonds.

Tenn., Whiteville.—Official: Bids were opened on October 9 for \$10,000 of 6 per cent. 1-20 year street-improvement bonds; denomination \$100 or more; dated October 1. J. W. Bass is Mayor.

Tex., Alice.—October 21, it is reported, an election is to be held to vote on \$55,000 of Jim Wells county courthouse and jail bonds.

Tex., Albany.—Reported defeated: \$50,000 of good-roads bonds.

Tex., Austin.—The Attorney General has approved securities as follows: \$700 of 5 per cent. 10-year Erath county common school district No. 76 bonds.

Tex., Bridgeport.—An official letter confirms report that city has voted \$14,000 of street-improvement bonds. J. L. Crawford is Mayor.

Tex., Brownsville.—Reported voted: \$20,000 of Cameron county courthouse and jail bonds.

Tex., Brownsville.—Reported that a Kansas City firm has purchased, at par and accrued interest, \$145,000 of water, light-plant and market-house bonds.

Tex., Brownsville.—Reported voted: \$230,000 of Cameron county courthouse and jail bonds.

Tex., Brownwood.—November 5, it is reported, an election is to be held to vote on \$15,000 of water-works bonds.

Tex., Dallas.—Reported that bids will be received until 10 A. M. November 1 for \$500,000 of 4½ per cent. Dallas county road bonds.

Tex., Foard City.—Reported voted: \$6000 of school district bonds.

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ELMER L. HATTER, C. P. A., Treasurer
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Manufacturers of and dealers in machinery and supplies of every kind should study the following facts about the South, for they indicate that it is a rich field for cultivation—a field in which to sow the seed of business with the certainty of reaping an abundant harvest if good seed be planted and the field well tilled.

Today the South has more capital invested in manufacturing than the whole country had in 1880; \$3,000,000,000 for the South today as compared with \$2,790,000,000 for the United States in 1880.

The value of the South's mineral output in 1909 was \$327,421,000 against \$131,700,000 in 1900, and yet the surface has barely been scratched.

In coal and iron and marbles and granites and phosphate rock, in oil and natural gas and sulphur, this is the most richly endowed section of the world.

Its limitless mineral possibilities are indicated in the fact that the South has nearly four times as much coal area as Great Britain, Germany, France, Austria, Italy and Belgium combined. Its other mineral resources are in keeping with its coal.

In 1890 the total value of all the farm crops of the United States was \$2,460,000,000. Last year the agricultural output of the South was \$2,975,000,000. These figures are so startlingly significant that comment is unnecessary.

Between 1900 and 1910 the value of farm properties in the South increased \$4,000,000,000, or 125 per cent.

Over \$1,000,000,000 was the income received by the South last year for its cotton crop. This year's crop will bring at least another billion, and yet cotton represents only one-third of the value of this section's agricultural products.

The value of the foreign exports and imports through Southern ports was last year \$896,000,000, a gain of \$360,000,000 over 1900.

Forty-seven per cent. of the total exports of the United States last year originated in the South and 36 per cent. passed through Southern ports.

The value of foreign exports through one Southern port exceeded by \$38,000,000 the combined export trade of San Francisco, Boston and Philadelphia, and was \$23,541,732 greater than the combined foreign export and import trade of all Pacific Coast ports of the United States.

These facts are suggestive of what the South has done. Intelligently studied they indicate how great will be the activity in the future, for Southern growth has just begun.

During the next five years greater progress will be made than during the last ten. This means widespread activity in the establishment of mills and factories of every kind, in the opening of mines, in the construction of private and public buildings, of wharves and warehouses and piers, in the building of railroads and the enlarged equipment of existing roads, in the development of water-power plants, in the building of good roads and public works generally.

A well-rounded, marvelous expansion of industrial and business activities is under way. It means an ever-increasing demand for machinery, for equipment, for supplies of every kind. It means that the business men who want to reap a rich harvest in the future must enter the field now, plow it and plant it, and later on reap the rich fruit of enlarged business operations.

You can cover this section to the greatest advantage by using the advertising facilities of the MANUFACTURERS RECORD. It is the Southern business man's paper. It is read and studied by the substantial people of this section, and likewise by thousands in other sections and abroad who want to know about the South. It is the medium through which to reach the buyers of machinery, equipment, supplies, etc. It is the medium which must be used in the sowing of the seed throughout the South if you would reap your share of the harvest of Southern business.

The MANUFACTURERS RECORD will be glad to discuss advertising with those who want to gather a harvest.

Tex., Grapeland.—An official letter denies report that the \$150,000 of 10-year Grapevine District road bonds have been sold; denomination \$1000; dated May 8, 1911. Address E. Winfield, County Judge, Crockett, Tex.

Tex., Mexia.—Official: Defeated: Road improvement bonds.

Tex., Mt. Pleasant.—Dewitt, Tremble & Co. recently purchased \$16,000 of 5 per cent. 30-year sewerage bonds at \$16,000; denomination \$500; dated June 15.

Tex., Orange.—The Lutcher & Moore Lumber Co. is reported to have purchased \$1,245,000 of bonds of Orange County Navigation District.

Tex., Sulphur Springs.—Reported voted: Water-works and street-improvement bonds.

Tex., Terrell.—Press dispatches state that Spitzer, Rorick & Co., Toledo, have purchased at par and interest \$12,000 of water-works and \$10,000 of street-improvement 5 per cent. 15-year bonds; denomination \$500; dated May 1, 1911.

Va., Danville.—Official: The Equitable Life Assurance Society, commonly known as the Equitable Life Insurance Co. of New York, has purchased \$150,000 of electric-light plant and \$30,000 of street-improvement 4½ per cent. 30-year bonds.

Va., Murphy.—Reported voted: \$25,000 of 6 per cent. three-year water-works extension bonds.

Va., Petersburg.—A bill is reported to have been introduced in the City Council providing for the issuing of \$175,000 of 4½ per cent. public-improvement bonds.

Va., Spottsylvania.—November 7, it is reported, an election is to be held in Spottsylvania county to vote on \$30,000 of road bonds of Berkeley district and \$70,000 of Livingston district.

Va., New Castle.—Official: October 12 an election is to be held to vote on \$1700 of 6 per cent. 10-year street and sidewalk improvement bonds. Bonds will be offered soon after they are voted. Address Town Council. Frank B. Ohmer is Mayor.

Va., Warrenton.—It is now stated that the \$75,000 Fauquier county road bond issue carried.

W. Va., Barboursville.—Bids will be received until noon October 23 for \$13,000 of 5

per cent. 5-30-year sewer bonds. Address C. R. Miller, Recorder.

W. Va., Broad Oaks.—According to press dispatches, petitions are being circulated asking for an election to vote on \$5000 of street-improvement bonds.

W. Va., Chester.—An election is reported to be held in Grant district, Hancock county, to vote on \$125,000 of road-improvement bonds.

W. Va., Grafton.—Official: Bids will be opened November 1 by F. C. Graham, A. Bartlett, R. M. Parrish and W. C. Hanway, Clerk, for \$80,000 of 5 per cent. 34-year water-works improvement bonds noted September 21; denomination \$100; dated September 21, 1911. A. F. McWilliams is Mayor.

At Newport, Tenn., bids will be received until 2 P. M. October 28 for \$100,000 of 5 per cent. Cocke county road bonds. Further particulars will be found in the advertising columns.

At De Funkiak Springs, Fla., bids will be received until noon November 7 for \$70,000 of 6 per cent. 20-year bonds of Special Road and Bridge District No. 1, Walton county. Further particulars will be found in the advertising columns.

At Wilson, N. C., bids will be received until noon January 1 for \$74,000 of 5 per cent. refunding electric-light and water-works bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES

The Planters' State Guaranty Bank of Mercedes, Tex., proposes, it is reported, to increase its capital from \$15,000 to \$25,000.

The Guyan Valley Bank of Logan, W. Va., according to press dispatches, has increased its capital from \$25,000 to \$100,000. S. B. Robertson is president.

Announcement is made that the American National Bank and the Union Bank & Trust Co., both of Nashville, Tenn., have consolidated under the name of the American National Bank of Nashville; capital and surplus \$1,800,000.

The Bank of Marshville at Marshville, N. C., is reported to have increased its capital to \$50,000.

Sold After Competitive Tests

97 out of every 100 WALES Visible Adding and Listing Machines are sold after rigid competitive tests. For instance: Sears, Roebuck & Co. of Chicago compared the WALES, point by point, with every other adding machine. They were so strongly convinced they purchased WALES machines to the value of \$22,875. This is the largest order ever given for adding machines to be used in one office.

WALES
Visible Adding and Listing Machine

On the WALES all the work is in plain view. This means accuracy, increased speed, greater comfort for the operator—no bending forward or backward.

FIVE-YEAR GUARANTEE

The WALES is the only adding machine on the market guaranteed five years. This, in itself, is undeniable proof of WALES durable construction.

FREE TRIAL

Tell us what your business is, and let us send you a WALES for free trial. No expense to you—no obligation.

Mail Coupon NOW

The Adder Machine Co.
WILKES-BARRE, PA.

Atlanta Office:
115 N. Pryor St.

Send particular
lars of your free
trial offer and
booklet describing
the WALES Visible.

Name, _____
Address, _____
Business, _____
Mfrs. Record 10-12-11.

Classified Opportunities

MEN WANTED

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALES AGENTS to sell feed-water heaters, evaporators, condensers and other power-plant equipment; guaranteed territory; commission. Address Fisher, 90 West St., New York City.

WANTED—Real salesmen acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttles Ave., Columbus, O.

AGENTS WANTED to sell lubricating oils, belts, hose, paint, varnish, to contractors, auto owners, mills, factories, etc. Exclusive territory to right party. Oil experience unnecessary. Manufacturers' Oil & Grease Co., Cleveland, Ohio.

WANTED—A charcoal iron blast furnace located south of the Ohio River will soon require services of an experienced founder. If position is desired by one with full knowledge of blast-furnace practice, give reason for change. Address No. 861, care Manufacturers Record.

WANTED—Five first-class, experienced electrical supply salesmen for Alabama, Texas, Oklahoma, Arkansas, Georgia; give references; state age; will pay good salary to competent men. Address Jobber, P. O. Box 201, New Orleans, La.

WANTED—Associate with capital in construction business in Southwest; good opportunity for energetic party in business that is now paying good profits, but which will permit of considerable enlargement. Address No. 869, care Manufacturers Record.

HANDLE AND SPOKE FACTORY wants services of an experienced foreman at once, familiar with Ober and Defiance lathes. Give reference in first letter. Address Lock Box No. 26, Kenbridge, Va.

WANTED—Man as manager of factory making implements, gas engines, rig irons, etc., who can invest \$5000 to \$10,000; good references required. Address Box 1022, Okmulgee, Okla.

WANTED—Partner in established real estate business; live town; country developing rapidly; experienced man preferred. Don't answer unless you have the money and mean business. Address P. O. Box 53, Russellville, Ark.

WANTED—Party with \$30,000 to \$40,000 to invest in a woodworking plant in Northern Alabama, good opportunity; will bear fullest investigation; plant now in operation; healthy, delightful climate; prefer man to take active part; write for full particulars. Address No. 871, care Manufacturers Record.

WANTED—At once, good draughtsman, surveyor and civil engineer who wants to connect permanently with large industrial corporation; must become a stockholder in company and serve as confidential man. Give full particulars and references in first letter. Address Manager, Office 71-68 Hudson St., Hoboken, N. J.

AGENCIES WANTED

MANUFACTURERS' AGENT would represent out-of-town concerns in New York and vicinity or give entire time to one line; large experience; best references as to character; have good showroom. Address M. L. B., care Manufacturers Record, 52 Broadway, New York.

SITUATIONS WANTED

ENGINEER who recently constructed hydro-electric power development will be open for engagement soon. Address No. 857, care Manufacturers Record.

ATTORNEY with extensive office experience would like to connect himself with some mercantile firm where he could look after collections and credits. Address No. 868, care Manufacturers Record.

A HIGH-GRADE machinery and supply salesman will be open for position to handle Southern territory; ten years' experience; can produce business; satisfactory reference. Address No. 874, care Manufacturers Record.

WANTED—Connection with responsible corporation (mining or manufacturing preferred) as secretary, treasurer, office manager or auditor by gentleman with extensive experience and highest references; open for engagement October 15. Address No. 832, care Manufacturers Record.

GENTLEMAN of wide experience as general manager of industrial enterprises, having successfully completed two very large developments in the South, is now open for a proposition; have experience in hydro-electric development and also in building industrial towns and handling additions to cities. Address No. 872, care Manufacturers Record.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

WANTED—Position by young man now employed by mill-supply house as salesman, with some manufacturer in kindred line; desire to devote my energy and talent to some one line; can change January 1; am single and will go anywhere, but prefer Western territory; am sober and industrious and can furnish references; will only consider place with reliable house. Address No. 866, care Manufacturers Record.

YOUNG MAN, thirty years of age, who has had five years' experience as traveling salesman, desires position as sales manager, district sales manager or salesman for some good manufacturing concern where there is chance for promotion; Birmingham, Alabama, district preferred, as have been connected in that district all the time; do not drink intoxicating liquors of any form and can furnish the very best of references. Address No. 856, care Manufacturers Record.

HAVING been consistently successful as a traveling salesman, department manager and sales manager, I am seeking a connection with some firm of high standing wishing representation in the South. I am at present very desirably situated, but find the possibilities much limited. If you are looking for a capable, energetic young man who can and will properly look after your interests, and you can offer something permitting of unlimited expansion, I would appreciate hearing from you. Box 1339, New Orleans, La.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

BANKS

COMMERCIAL STATE BANK, Birmingham, Ala. State depository. Prompt attention to Alabama collections.

THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

HOTEL FOR SALE

HOTEL FOR SALE—One of the finest hotels on the Galveston Beach, consisting of 30 rooms, with modern conveniences; all car lines pass the hotel; one block from the popular bathhouses; surrounded by all the beach amusements. This hotel faces the Gulf of Mexico, located on the Galveston beautiful boulevard, has an elevation of 22 feet above the gulf, has the reputation all over the State of Texas as one of the best hotels in Galveston. Here is an opportunity for a good hotel man. Galveston Beach is growing more popular every year. Write for further particulars. J. L. Boddeker & Co. Agents, 410 20th St., Galveston, Texas.

GRANITE QUARRY FOR SALE

WILL SELL OR LEASE fine granite quarry of about 30 acres, situated 40 miles south of Atlanta, Ga., on the Central of Georgia Railway; granite is finest quality, easily quarried and most excellent for monumental and building purposes. Specimen cubes on exhibit in American Museum of Natural History, New York city, and State Capitol, in Atlanta. Correspondence solicited. Address Lock Box 74, Newnan, Ga.

CAPITAL WANTED

A WELL-ORGANIZED COMPANY would like to correspond with first-class investors in order to raise its capital stock. Further information, address No. 873, care Manufacturers Record.

AN INVESTMENT OPPORTUNITY—A manufacturer in a hustling Southern town, producing a high-grade line of goods for which there is a steady demand, wishes to raise more capital to better develop his already well-established, well-paying business.

A bond issue is considered of \$25,000, guaranteeing 6 per cent., secured by a first lien on all real estate and personal property.

This plant was started with a capital of less than \$5000 by the present operator and owner five years ago, and has never been shut down a day for lack of orders. This business shows a valuation of over \$39,000 by a recent audit.

The owner wishes to negotiate with parties who will consider the purchase of the bonds, or, if they prefer, preferred stock.

Complete information can be obtained of M. V. Richards, Land and Industrial Agent, Southern Railway, Room 52, Washington, D. C.

Price \$32,500; easy terms. Address Box 102, Richmond, Virginia.

If you know any ambitious, tolerably well educated young or middle-aged man who is making less than \$3000 a year and would like to make from \$3000 to \$5000, kindly tell him to write for a circular to The School of City Advertising, Knickerbocker Building, Baltimore, Md.

You can buy cheap, on account of owner's ill-health, a well-known and popular summer resort in the mountains of Virginia; very successful season this year; water has wide reputation for its medicinal qualities; property contains 340 acres, about half in timber and balance in grass; 3½ miles from one railroad and only ½ mile from another; splendid opportunity for the right party.

Price \$32,500; easy terms. Address Box 102, Suffolk, Va.

For sale or trade in cash or exchange for first-class black farming lands, electric light and power plant, newly equipped with modern up-to-date automatic steam and electrical machinery, line construction and complete system of operation in growing town of 3500 population, together with five franchises for long-distance transmission of electrical energy into surrounding towns, proposed bonuses, etc.; value \$50,000, and gross income about \$12,000 per annum; health demands change is reason of desire to sell or trade. Address Judge W. E. Spell, Asst. Atty.-Genl. Texas Central R. R. Co., General Offices, Waco, Tex.

MAPS AND BLUE PRINTS

MAPS OF TEXAS COUNTIES.—We make blueprint maps of nearly all Texas counties and several Louisiana parishes. Write for prices on those desired. Singleton Bryan & Co., Beaumont, Texas.

FACTORY SITES

FREE SITES and other liberal assistance; cheap fuel; natural gas, oil, coal and abundant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

TYPEWRITERS

TYPEWRITERS.—Remington and Smith Premier; latest models; fully guaranteed; ½ to ¾ original price; no agents; write us; save commissions. Standard Writing Machine Co., Washington, D. C.

If you are interested in purchasing a high-grade typewriter and do not care to invest \$100 asked by the manufacturer, we would like you to investigate our remanufactured machines. Enterprise Exchange, Inc., 90 E. Baltimore St., Baltimore, Maryland.

LOCATIONS SECURED

I CAN FIND YOU A LOCATION for your sawmill or slack-barrel stave factory. Write for particulars of my plan and tell me about what you want. Jo A. Parker, Parma, Mo.

INDUSTRIES WANTED

STEEL BOLT, NUT AND RIVET FACTORY WANTED.—An excellent opportunity is now open in a Southern State for an experienced manufacturer with some capital to locate such a factory. A similar plant in the South does not today exist. The home market is large, but must depend entirely upon shipments from far-distant Northern cities. Cost of manufacture is lowest in the country. Steel, coal and low-priced power to be had near at hand. Intelligent labor easily obtained at reasonable wage scale. City offers exemption from taxation for term of years. For further information refer to File No. 22508 and address M. V. Richards, Land and Industrial Agent, Southern Railway, Room 52, 1320 Penn. Ave., Washington, D. C.

SAW MILL AND TOOL HANDLE FACTORY

SAWMILL & TOOL-HANDLE LOCATION. 15,000,000 to 25,000,000 feet of short-leaf pine stumps and 7,000,000 to 8,000,000 feet of ash, oak and hickory of fine quality in East Texas; railroad passes land; logging easy. Interstate Realty & Improvement Co., 215 Temple Bldg., Houston, Texas.

MISCELLANEOUS

WANTED—Asheville, N. C., 31,000 population, including suburbs; 38 miles paved streets; best water on earth; men with capital to invest in money-making enterprises; good opening for manufacturing enterprises. Write Board of Trade.

CLEVELAND, TENN., WANTS YOU.—The best town in the Southeast with a hydroelectric development of 32,000 initial horse-power for manufacturing purposes, final development 82,000 horse-power. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; spring water piped to all parts of the city; cheap raw materials; 186 miles of pike roads in county; fine farming and trucking section; best of public utilities; cheap white labor; cheap power; ideal location for cotton mill, furniture factory and brick manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

VICTORIA, TEXAS, head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

SUFOLK.—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; opportunity for furniture and woodworking plants and any wholesale, jobbing or manufacturing business; center of tidewater; richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trade, Suffolk, Va.

"BUSIEST AND BEST BUILT CITY IN TEXAS," Wichita Falls possesses unsurpassed natural resources and advantages. Offers exceptional opportunities for investors; free sites for manufacturing establishments; cheap fuel; natural gas, oil, coal, electricity and abundant water from the largest body of water in Texas; six railroads; raw material at hand; latest approved public utilities; creosoted wood block pavement throughout business section; over fifty miles concrete sidewalks. Most rapidly developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commerce, Wichita Falls, Texas.

Classified Opportunities

DEWEY, OKLAHOMA, people want to furnish cheap gas and a fine site to any good manufacturing plant, whether great or small, that will come to their city. Two good lines of railroads and good prospects for other lines to build through Dewey. We have large cement plant now turning out 300 barrels of cement per day. Fine farming country all around. Large gas and oil field. Write J. K. Green, Mayor of Dewey.

INDUSTRIAL PLANTS FOR SALE

FOUNDRY, MACHINE, SASH AND BLIND FACTORY

FOR SALE OR LEASE.—Foundry, machine, sash and blind factory, located in the heart of Salisbury, N. C.; also 184 acres timber land, located on R. R., near Whitely, N. C. Address Box 186, Salisbury, N. C.

SAW AND PLANING MILL

FOR SALE—Complete saw and planing mill in operation; 8000 acres land; estimated stumpage, 12,000,000 pine, 3,000,000 cypress; rates; splendid colony proposition; reasonable terms can be arranged. For schedule address Granville Real Estate & Trust Co., Oxford, North Carolina.

STOVE FOUNDRY

STOVE FOUNDRY FOR SALE.—Without reserve we will sell to the highest bidder on November 2, 1911, at Dalton, Ga., our entire plant. A rare chance to invest about \$15,000 and get one of the best foundries in the South. Satisfactory reasons given for selling. Don't miss this sale. Mascot Stove Mfg. Co., Dalton, Ga.

STEAM LAUNDRY

FOR SALE—Steam laundry in growing South Florida town, doing a good business, in a large and rapidly developing territory. Address Owner, Box 125, Clearwater, Florida.

FLOUR MILLS

TWO daily 60 and 75 barrel operating flour mills for sale, located near Western Maryland; both in excellent wheat belts. Arthur W. Fastic, 124 W. 25th St., Baltimore, Md.

MINERAL AND TIMBER LANDS WATER POWERS AND MISCELLANEOUS PROPERTIES

READ the bargain offered in "Business Opportunities" of summer resort with 300 acres, situated in the mountains of Virginia.

WRITE HELLEBERG & BLAIR, 418 Roberts-Banner Bldg., El Paso, Texas, for information about business opportunities of all kinds and investments in town lots in the new town of Columbus, situated in the wonderful Lower Mimbre Valley, New Mexico, 74 miles west of El Paso, on the El Paso & Southwestern R. R. Pure soft shallow water for irrigation. Free Government land. Patented land at from \$15 to \$35 per acre.

\$50,000,000 IN THREE YEARS.—Invest in Washington real estate. As the nation grows so must its capital city develop. The increased value of Washington real estate in past three years was approximately \$50,000,000. Did a portion of this represent your profits? We are now placing on the market one of the best-located subdivisions in the choice northwest section, fronting one mile on Sixteenth street, and overlooking the National Rock Creek Park. The future of this section will make this the best investment in the suburbs of the national capital. For plan and full information apply to Robert E. Heater, 411-412-413 Colorado Building, Washington, D. C.

FACTORY SITES, Business Property, Residences and Farms. If interested in the metropolis of the Southwest or its territory, write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea), or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

MINERAL LAND FOR SALE

WE ARE IN CONTROL, fee delivery (titles perfect), of large boundaries in Tennessee coal, iron and mineral belt. Surveys 70,000 to 90,000 acres, convenient to transportation, having on it and near all the raw material needed for manufacturing purposes, good bituminous, domestic and coke-making coal; veins show large average tonnage per acre and easy mining cut, and abundance of high-grade iron ore. These valuable holdings can be delivered at comparatively low figures, one-half of what it is in reality now worth, to genuine buyers who can show ratings or bank references to warrant the ability to promptly take over these lands. None but principals need reply. Open bar-gain to direct buyers. Address J. C. Lindley, Greensboro, N. C.

MARL DEPOSIT

VALUABLE MARL DEPOSIT.—Unlimited quantity; superior quality; assays 95 per cent carbonate of lime; beats burned lime or ground limestone for land; ideal for handling; railroad through it; price low. Address J. W. C. Miller, Roanoke, Va.

COAL MINE FOR SALE

A LIGNITE COAL MINE FOR SALE.—SNAP.—Situated in Milam County, Texas, 100 acres fine vein of fine lignite; mine in fine condition; machinery all new; running now in full blast and making good money; best kind of market for the output; commissary and workmen's houses all in good condition; will bear the strictest investigation. Price \$90,000. John H. Grist & Co., Austin, Tex.

CUT-OVER TIMBER LANDS

CUT-OVER TIMBER TRACTS.
50,000 acres cut-over pine lands, Miss.... \$6.50
30,000 acres cut-over pine lands, La.... 6.00
75,000 acres cut-over pine lands, Tex.... 5.00
18,000 acres cut-over hardwoods, La.... 4.50
Marsh Lands for Reclamation.
69,000 acres in a body, Gulf Coast of La. 3.00
Timber Lands.

20,000 acres L. L. Y. pine, Fla., cut 3500 ft. 7.00
15,000 acres L. L. Y. pine, Ala., cut 7000 ft. 21.00
30,000 acres hardwood, cut 10,000 ft. (60% red gum)..... 10.00
Finest red gum proposition South.

Wm. R. Taylor, 508 Perrin Bldg., New Orleans, La.

CUT-OVER LANDS AND FARMS

TIMBER AND COLONIZATION LANDS.—Twenty thousand acres pine and cypress, ten thousand cut over, in Florida; forty thousand cut over, Alabama; all on railroads. Power & Brooks, Box 82, Montgomery, Ala.

FOR SALE—Cut-over lands in South Georgia on railroad; either small or large tracts; price \$5 per acre in tracts over 5000 acres. Brewster Lumber Co., Savannah, Ga.

TIMBER LAND FOR SALE

MILLIONS IN IT.—86,000 acres pine timber land in Mexico, near U. S. border; great milling or investment proposition; only \$2 per acre; easy terms; nothing else like it in America. M. F. Simmons, Kansas City, Mo. 20 Scarritt Arcade.

FOR SALE—Two large, desirable timber tracts directly on railroad; attractive figure to early purchaser. For particulars write S. Shafer & Co., Pineville, Ky.

FARM AND TIMBER LANDS

TIMBER, FARMING AND RICE LANDS for sale near Wilmington, N. C., on or near new railroad to Southport; new highways now building. Rare bargains for cash. Also an ideal dairy location near Wilmington. E. W. Taylor, Winnabow, N. C.

I HAVE 10,104 acres fine bottom cotton and corn land in Central Texas, in rain belt; 5300 acres in high state of cultivation; balance heavy timber, of which 95 per cent is tillable; 40 sets of tenant-houses; two cotton gins and one sawmill goes with the land; three-quarters to one-half of cotton per acre being made this season. Big money can be made in colonizing this tract with Italian farmers, and correspondence is solicited with anyone in position to handle a colonization proposition of this kind with headquarters in Chicago or New York city. A. G. Nordstrom, Box 43, Austin, Texas.

AGRICULTURAL TIMBER LANDS FOR SALE.—We have four tracts of hardwood timber, 1700 to 3500 acres, on which the timber will pay more than double the cost of the land, and all are in the very best farming districts of Texas, on or within three miles of railroad towns, and can be subdivided after the timber is cut off and sold for farms. Price \$12 per acre; easy terms. Write for full particulars. T. H. Barrow & Sons, Austin, Texas.

GEORGIA FARM LAND FOR SALE.—I own in fee simple, titles perfect, 9781 acres of fertile farm land, lying along two trunk-line railroads for seven miles and within 38 miles of Savannah, Georgia. On this land is a good stand of yellow pine, estimated to cut 20,000,000 feet, with thousands of cords of firewood, posts, ties and other small timber. Also good 8-room house, a barn that cannot be duplicated for \$1000, store building and other houses, with railroad station, stores and church on the property. Low transportation rates prevailing at Savannah, giving prime shipping facilities to Northern markets for vegetables and fruit, with excellent market at home the year round. Healthy location, good water, and nothing better in Georgia as a colonization proposition. Will not divide tract, but with financially able parties will trade outright, or put in property and take interest in development of same. For price and terms and further particulars address W. W. Robertson, Norfolk, Va.

WE HAVE fifteen thousand acres of land in one body, ten thousand heavily timbered and five thousand as fine farming land in the State; next to famous cabbage belt, near Youngs Island, S. C. We wish to develop it, cutting timber, turpentine boxes, dividing into hundred-acre truck and cotton farms. Will sell half interest to develop it at seven dollars per acre; makes a bale and half cotton to acre; heavily timbered; close to market; plenty labor; fine pine land; climate as good as Summerville, S. C., for health. Apply early, and none except men meaning business need apply. Land close to this cannot be purchased for one hundred dollars per acre. The Sea Island Plant & Seed Co., Meggetts, S. C.

I HAVE BARGAINS IN TIMBER

TRACTS, large colonization propositions, cut-over lands and reclamation tracts in any wise wanted up to 150,000 acres from \$2.50 per acre up.

Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$6,000,000.

FOR SALE—15,000 acres of land in one body, heavily timbered; best land in the South to produce cotton and truck; climate good; in the pines; only five miles from Charleston; \$17.50 per acre for a quick purchase; immediate possession; right near famous cabbage belt, where lands cost \$150 per acre; good titles; plenty labor. See Island Plant & Seed Co., Meggetts, S. C.

FOR SALE—Large and small plantations in the rich Red River Valley, cheap and on easy terms; also large tract of hardwood. Apply to E. J. Iles, Alexandria, Louisiana.

COLONIZATION LANDS

COLONY location in South Georgia: 6000 acres fine trucking lands on two railroads and navigable river; good water and health; titles good; terms easy. H. A. Cannon, Waycross, Ga.

TEXAS AND NEW MEXICAN LANDS.—One acre to 100,000 for general farming, fruit and truck; large tracts for subdividing or colonizing both prairie, timber and cut-over land. Interstate Realty & Improvement Co., 213 Temple Bldg., Houston, Texas.

SAFE INVESTMENTS THAT PAY.—U. S.

colonies report for 1910 shows that Texas farm land values increased 21% in 10 years. Texas has just started to develop, and the next 5 years will bring startling results, due to heavy influx of people from all parts of the world, and also augmented by the completion of the Panama Canal. If you want an investment, investigate this proposition: 11,600 acres good farm land, 85% of which is smooth prairie; will grow any kind of crops; located in the rain belt, where the climate is ideal, 4½ miles of Edna, in Jackson county. A fine colonization proposition that will sell in small tracts for \$50 per acre. Owner must sell as a whole, and will sacrifice for quick sale at \$2.50 per acre; one-fourth cash; balance easy terms, with release clause. Write A. A. Ritcheson & Co., Austin, Texas. Reference, Austin National Bank.

COLONIZATION LAND IN SOUTH GEORGIA.—We have on the Atlantic Coast Line Railroad, between Tifton and Waycross, Ga., several nice tracts for colonization. We can sell you five, ten to fifteen thousand-acre tracts, none of it further than four and a half miles from railroad station. This is a high-class farm land, and will bear close investigation. Write C. L. Parker, Tifton, or McLendon Brothers, Atlanta, Ga.

13,284 ACRES in Gaines county, all tillable, in the shallow water belt of West Texas. This is one of the finest ranches in West Texas, composed of fine agricultural land; subdivided in tracts of 492 acres; a fine colonization proposition; \$20 per acre; \$5 due the State; low rate of interest; will take one-third in good trade; terms on balance. Cheatham & Haney, Room 2 Provident Bldg., Waco, Tex.

TRACT FOR COLONIZATION.—12,000 acres in Lavaca and Jackson counties, Texas; 95 per cent, tillable; black waxy and black sandy land. On both sides of Lavaca River. Numerous settlements and good wells of water on tract; all subdivided and ready for colonizing. Will give good terms on this tract. Emil Locke, No. 712-13 Gibbes Bldg., San Antonio, Tex.

RANCHES FOR SALE

WEST TEXAS LANDS FOR INVESTMENT.—For safe, sure and big returns on an investment of any size I can recommend at present some desirable tracts of West Texas ranch land that I have for immediate disposal. Prices range from \$1.50 to \$3.50 per acre; liberal terms. Would be glad to furnish further particulars on application. N. R. Lowry, Austin, Texas.

PECAN ORCHARDS

BUY A FIVE-ACRE PECAN ORCHARD in Alabama, "The Land of Plenty." I have fifty tracts of five acres each admirably adapted to this profitable crop. I manage tracts for non-resident owners if preferred, and can furnish best of references. Investigation invited. Write for full information and terms. Oscar V. Case, Fort Payne, Ala.

FARM, FRUIT AND TRUCK LANDS

ALABAMA

ALABAMA.—Good health, fine water, lovely climate; large and small farms at bargain prices; grow anything. Write now for list. G. A. Taylor, Opelika, Alabama.

ARKANSAS

FOR SALE—A fine cotton plantation of 532 acres, known as the "Galloway place," near Scott, Ark.; want to sell by the 15th November, 1911. R. A. Little, Little Rock, Ark.

FLORIDA

FLORIDA FRUIT AND TRUCK LANDS.—We offer 10-acre tracts in that part of the State of Florida lying in Hillsboro county and Lake Butler region, in the Pinellas peninsula, on the west coast of Florida, on the Gulf of Mexico; with its elevation and rolling hills is especially suited for fruits of all kinds—grapefruit, oranges, grapes, dates, figs, bananas, peaches and other fruits, as well as vegetables, potatoes, corn, beans, peanuts and all the varieties that can be produced anywhere. The Tarpon Springs district offers the most favorable conditions for farmer, home seeker and investor. Fertile lands in small tracts, easy monthly payments; guaranteed title. Investigation invited. If you want a bargain and a home in the most desirable part of Florida, write now for particulars and reservation. Tampa & Tarpon Springs Land Co., Tampa, Florida.

TEXAS

IRRIGATED FARM.—450 acres of rich sandy loam, level, and to be irrigated from the famous Elephant Butte Dam, now in course of construction. This land can now be bought for \$35 an acre. Write us for full description. Loomis Bros., El Paso, Texas, Mexican Timber Lands.

FOR SALE—225½ acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

TEXAS LAND FOR SALE.—If you want black land farms or colonization proposition, write me now. Remember, I pay your railroad fare if you buy from me. J. H. Russell, Abilene, Taylor county, Texas.

IRRIGATED LANDS

—Parties in the Northeast and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawlett & Davis, Pecos, Tex.

10,000-ACRE RANCH.—Large per cent agricultural land; fine grass; fairly well improved; well watered; located in Southwest Texas, where the climate, health, fishing and hunting is unsurpassed. Price \$7.50 per acre; good terms. Walton & McCauley, 105½ South 4th St., Waco, Texas.

FLORIDA winter home and celery farm, 10 acres, subirrigated, facing St. Johns River; fine fishing and shooting; beautiful bungalow, surrounded by orange trees. Address Cecil Gabblett, Sanford, Florida.

WHY PALMETTO LEADS.—The 800,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Ceia and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

FOR SALE—Sunny Slope Farm, 12 miles west of Ocala, Marion county, Florida; well watered; fenced with wire; 300 acres virgin pine and hardwood timber; a large deposit of phosphate rock; a first-class location for stock and truck farm; in convenient reach of Jacksonville and Tampa markets, the best in the South; best reasons for selling. Address Owner, Box 125, Clearwater, Florida.

FLORIDA FARMS ARE FORTUNES.—

Our soil similar to fertile sections Iowa, Missouri; easy-payment plan. Write for booklet. Milton Land & Investment Co., Marianna, Fla.

LOUISIANA

TRUCK AND DAIRY LANDS.—200 improved farms. On account of boll-weevil can sell \$20 to \$30 per acre; on main line of L. C. Ry., 88 miles north of New Orleans, 18 miles north of largest strawberry shipping point in U. S., and 45 miles south of largest tomato shipping point; two creameries in 20 miles. Send for catalogue. Ossyka Realty Co., Inc., Ossyka, Miss.

MEXICO

230,000 ACRES in the State of Coahuila, Mexico, in the famous Laguna District. This land will produce anything that grows in the temperate zone, especially cotton. There is an abundance of never-failing water, one spring now irrigating 250 acres. Soil is sandy loam. The principal feature of this tract is the entire absence of gravel near the foot-hills. The high lands of the tract afford the finest pasture, and the abundance of springs makes it unnecessary to pump water for stock. One big ranch-house and fourteen houses for laborers, 250 head cattle, 6 miles, 3 wagons, harness and harness to match. Titles perfect and guaranteed. This can be bought for \$1.25 an acre. Henry Cass & Fry, 30 City National Bank, El Paso, Tex.

MISSISSIPPI

3555 ACRES of good hill cotton land for sale; now in successful operation; well supplied with negro labor. The plantation lies between two branches of the Illinois Central Railroad; nearest shipping point, four miles from the dwelling. The land corners within half mile of the railroad. A sufficiency of cabins for tenants, stables, cribs, cotton pens and all outhouses. Forty-five head of mules and horses, cows, farming implements and feedstuff. Price very low. Terms good. Address A. C. Leigh, Grenada, Miss., bona-fide owner of the property.

NORTH AND SOUTH CAROLINAS

FOR SALE—11 acres land Williamsburg county; dwelling, store and outbuildings; one acre cleared; beautiful grove; good business center; churches, schools near. J. L. Cook, 1405 Main St., Columbia, S. C.

FARM FOR PROFIT in Eastern North Carolina, the "Nation's Garden Spot." Leads other localities for vegetables, fruits and staple farming on small capital. Homeseekers and investors, write Carolina Trucking Development Co., \$15 Southern Bldg., Wilmington, N. C.

TEXAS

PECOS PALISADES LANDS.—Ranch and irrigated lands in lower Pecos Valley, S. L. Estates, 405 North Texas Building, Dallas, Texas.

IRRIGATED FARM.—450 acres of rich sandy loam, level, and to be irrigated from the famous Elephant Butte Dam, now in course of construction. This land can now be bought for \$35 an acre. Write us for full description. Loomis Bros., El Paso, Texas, Mexican Timber Lands.

FOR SALE—225½ acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

TEXAS LAND FOR SALE.—If you want black land farms or colonization proposition, write me now. Remember, I pay your railroad fare if you buy from me. J. H. Russell, Abilene, Taylor county, Texas.

IRRIGATED LANDS.—Parties in the Northeast and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawlett & Davis, Pecos, Tex.

Classified Opportunities

[CONTINUED FROM PAGES 78 AND 79.]

TEXAS fig and orange lands, the most profitable in the Southwest, developed and undeveloped, from \$60 to \$200 per acre. Also large lists of McLennan county, Central and South Texas farm lands. Write us for particulars. Elder & McDonald, 614 Amicable Building, Waco, Texas.

FOR SALE—300 acres fronting on San Saba River, 1½ miles from depot; about 200 acres in cultivation; two sets improvements; fine truck land; only 30-foot lift to irrigate; will produce 300 bushels potatoes and 500 bushels onions per acre; will cut up and give long terms. G. W. Hutchison, Owner, Ebony, Texas.

JAS. GOODE REAL ESTATE CO., ranch and irrigated lands. Office, Orient Hotel, Pecos, Tex.

FOR SALE—162 acres of smooth, level land in the artesian belt; unimproved; artesian water can be had at about 800 feet. This land is one and one-half miles from Derby, Frio county, Texas, on the International & Great Northern Railway. If you want a fine piece of land, write to Henry Borchers, Laredo, Tex.

IRRIGATED TRUCK FARM for sale, three miles from San Marcos, Texas, the city of good schools; 40 acres in cultivation; nice pecan grove; lasting water; seven-room house; an ideal place for dairy, chicken ranch and truck farming; \$150 per acre. J. R. Porter, San Marcos, Texas.

SAN BENITO, TEXAS, IRRIGATED LANDS.—10 acres or more, close to shipping stations of the Interurban Railroad; big canal through every tract. Ask for booklet. Engle Bros., 412 Gibbs Bldg., San Antonio, Tex.

COTTON AND CORN LAND.—12,500 acres, near two good railroads, being one mile from one and two miles from the other; splendid colonization tract; at \$10 per acre; one-fourth cash; balance 6 per cent. Address owner, Dr. C. S. Preston, 1007 Scanlan Bldg., Houston, Texas.

TEXAS COTTON AND SUGAR PLANTATION.—200-acre plantation on Colorado river, near Eagle lake; railroad switch on property; about 1000 acres river-bottom land in cultivation; 18 houses, barns, cribs and cotton gin, grist mill, blacksmith shop and many other improvements; 200 head stock; about 40 horses and mules; planted this year in cotton and corn; finest pecan grove in South Texas on property. Altogether is finest and cheapest thing in State. Everything goes for \$35 per acre; easy terms. Kullenberg Realty Co., 302 Gibbs Bldg., San Antonio, Texas.

THE FRIOS VALLEY WINTER GARDENS, La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artesian belt; grow oranges, figs, Bermuda onions. We are opening Fowlerton, a new town on new railroad in heart of the colony. Guaranteed improvements on town-site. A 10-acre farm and free residence lot on terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plats, etc. Fowler Brothers Land Co., Frost Building, San Antonio, Texas.

GREATER HOUSTON (Population over 100,000).—Just twelve miles out on Main street (Houston's \$200,000,000 thoroughfare) is located North Houston Gardens; 10-acre tracts only \$500; terms, \$25 cash, balance \$15 per month, no interest; five-acre tracts, \$400; terms \$15 cash, balance \$7.50 per month, no interest; 142-acre improved farm 50 miles from Houston, price \$25 per acre. H. S. Taylor, Scanlan Bldg., Houston, Texas, Member Texas Real Estate Exchange and the Texas Realty Association.

FOR SALE.—Farm at Arcadia, Texas, consisting of five acres and five-room cottage, large barn, chicken-houses, fine well, also large tank for rain water; all improvements in good condition. This land will grow anything. It is fine orange land; has some orange trees on it. Arcadia is 15 miles from Galveston, on the Gulf, Colorado and Santa Fe Railroad, a growing town. The climate is delightful and healthy. This place can be bought at bargain. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

FOR SALE—300 acres on San Saba River, 1½ miles from depot; fine truck land; will produce \$300 per acre if irrigated; will cut up and put in pump. G. W. Hutchison, Owner, Ebony, Tex.

VIRGINIA AND MARYLAND

VIRGINIA AND MARYLAND high-class water-front property on the famous Eastern Shore of Maryland, also on the Chesapeake Bay in Virginia, and farms in all the Piedmont section; many bearing commercial apple orchards in the mountains of Virginia. Send for Catalogue S. Southern Farm Agency, 721 Main St., Lynchburg, Va.

F FARMS of 30 acres, \$1000; 68, \$1200; 225, \$7500, and a beautiful river front of 28 acres, \$4000; most healthful climate. F. A. Clark, Mathews C. H., Va.

FOR SALE—40 acres land; 9-room house, hot and cold water, bath, etc.; heated by hot water; several tenant-houses, barns, etc.; one mile from county seat and railroad; fine bottom land and timber. Price, with equipment, \$15,000. Address Wm. G. Miner, Chatam, Va.

MACHINERY AND SUPPLIES

FOR SALE—Rebuilt Fay & Egan six-roll planer and matcher in good condition: two extra pair cutter heads. Yelloline Lumber Co., Greensboro, N. C.

WANTED.—Every consumer in the Southwest to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufactures track spikes, track bolts, machine bolts and nuts; also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guaranteed.

FINANCIAL

FOR SALE—\$50,000 worth first mortgage 8 per cent. notes on improved farm lands located in Central Texas. Cheatham & Haney, Waco, Texas.

SAVANNAH, GA.—Real estate loans paying 6 per cent. to 7 per cent. to the investor; absolutely safe. Beautiful sites for winter homes at Vernon View, the salt-water place near Savannah on the Grand Prize Course; ideal winter climate. G. A. Mercer, Law and Real Estate, Savannah, Ga. References: Any bank or trust company in Savannah.

8 PER CENT. 5-YEAR OKLAHOMA FARM MORTGAGES.—Yes, rate is high, but sure and easily paid; conditions warrant it, and you get benefit; lands cheap, rich; values doubling; 25 years experience in Southwest; 10 years bank cashier here; know people, lands, laws, resources, local conditions; never lost a mortgage nor had a title contested; abundant references; circular; investigate. J. G. JAMES, Roff, Oklahoma.

PROFESSIONAL

ARE YOU POSTED on twentieth-century patent searching? The engineer service separate from law practice? Read No. 2-B, Inventor's Pocket Library, free for stamp. Engineer Searching Co., Fleming Bldg., Washington, D. C.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Bldg., Washington, D. C., Member Bar U. S. Supreme Court. Patents and Trademarks; Patent Suits for Infringement. Mr. Brown is especially qualified to prosecute cases in Patent Office and patent litigation from both Engineering and Legal standpoints, having been Examiner in U. S. Patent Office for nine years. Send sketch for advice.

PATENTS OF QUALITY.—The valuable and salable kind. Send for free advisory information. Reference to clients throughout the U. S. Geo. R. Hamlin, Patent Lawyer, Inventive Age Bldg., Washington, D. C.

IDEAS WANTED.—Manufacturers are writing for patents procured through me. Send for free 72-page guide and "Stepping Stones" (containing over 200 inventions wanted). Personal services. Clients' patents sold free. Trade-marks registered. R. B. Owen, Dept. 12, Washington, D. C.

PATENT YOUR IDEAS.—\$100,000 offered for one invention, \$3500 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for free report as to patentability; patent obtained or fee returned. We advertise your patent for sale at our expense. Chandee & Chandee, patent attorneys, 978 F street, Washington, D. C.

PATENT WHAT YOU INVENT.—Your ideas may bring you a fortune. Our free books tell what to invent and how to obtain a patent. Send sketch of invention for free opinion as to patentability. Patents obtained or fee returned. Patents advertised for sale free. H. Ellis Chandee & Co., successors to Woodward & Chandee, Suite 75 Bonnot Bldg., Washington, D. C.

PATENTS Secured or Fee Returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention: \$16,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PATENTS FOR SALE

WE HAVE recently secured the following patents. Address all communications to Sales Dept., Victor J. Evans & Co., Washington, D. C.: Leon S. Todd, shingle sawing machine; Sutton Strong, machine for forming concrete blocks; Jacob B. Ramey, train pipe coupling; Walter O. Walston, clothesline; Martin L. McCoy, adjustable ratchet wrench; Norman E. Houser, electric fountain syringe; E. S. Beck, electric circuit opening device; J. M. Ashmore, window shade and curtain fixture; C. W. Dayton, process of preserving honey; Geo. A. Hoffman, coupling pole and socket; Emil Etchison, railroad spike; Chas. G. Burress, rail joint; Seth E. Gill, bottle mold; Clarence L. Barnhart, power recorder; L. M. Lawsen, gas generator; A. Abel, knife; John S. Adams, ironing board; John G. Friberg, horse collar; Leon A. Hewitt, monoplane; W. A. Henderson, self-adjusting bearing; H. B. Cox, stirrup; R. E. Cunningham, air and water attachment for dental engine; John H. Harrington, eyelet baking can; F. L. Webster, bale tie machine.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

GOVERNMENT PROPOSALS

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., October 3, 1911. Sealed proposals will be received in this office until 3 o'clock P. M. on the 16th day of November, 1911, and then opened, for the construction, including roof and ground surface drainage system of a four-story stone-faced fireproof building of approximately 90,000 square feet of ground area for the Bureau of Engraving and Printing, Washington, D. C. Drawings and specifications may be obtained at this office at the discretion of the Supervising Architect, but will not be ready for delivery before October 21, 1911. JAMES KNOX TAYLOR, Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 26, 1911. Sealed proposals will be received in this office until 3 o'clock P. M. on the 23d day of October, 1911, and then opened, for the mechanical equipment (except elevator) of the United States Postoffice at Bellingham, Wash., in accordance with drawings and specifications, copies of which may be obtained at the office of the superintendent of construction at Bellingham, Wash., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

POSTOFFICE DEPARTMENT, Washington, September 13, 1911. Sealed proposals will be received at the office of the Purchasing Agent for this Department until 2 o'clock P. M. October 16, 1911, for supplying all the engraved and printed matter required by the money-order service during a period of four years commencing December 1, 1911. Specifications and samples will be furnished upon application to the Purchasing Agent. FRANK H. HITCHCOCK, Postmaster-General.

PROPOSALS FOR ELECTRIC TOWING

Locomotives for the Canal Locks. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 20, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 650) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOOGES, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR MATERIAL FOR CHAIN FENDERS for all locks, including Steel Hawse-pipe Castings, Cylinders, Sheaves, Eyebars, Structural Work, Operating Valves, Piping and Fittings, Mechanism for Starting and Stopping the Pumps, etc. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 14, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 649) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOOGES, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR LAVATORIES, WATER-

CLOSETS, PIPEFITTINGS, VALVES, COCKS, GREASE CUPS, OILERS, SHEET LEAD, SOLDER, SAWS, FILES, BUCKETS, CORN BROOMS, PICK HANDLES, WOOL WASTE, PACKING, BELT LACING, SASH CORD, EMERY CLOTH, LINOLEUM, TWINE, RAILWAY FLAGS, BLOTTING PAPER, RED LEAD, ASPHALTUM, VARNISH, MURIATIC ACID, LYE, CROSCROSTIC SWITCH TIES, etc. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. October 27, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 644) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOOGES, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

U. S. ENGINEER OFFICE, Jacksonville, Fla., September 20, 1911. Sealed proposals for removing wreck Str. "Zeeburg" from St. Johns River, Fla., will be received at this office until 12 M. October 20, 1911, and then publicly opened. Information on application. J. R. SLATTERY, Capt., Engrs.

NEW BOND OFFERINGS

\$35,000 6% Bonds

The Board of Mayor and Aldermen of the Town of Obion, Tennessee, will receive bids for \$35,000 6 per cent. water, light and school bonds at the Mayor's office until 2 P. M. October 18, 1911. For all necessary information address S. J. Harris, Recorder.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS

NEW BOND OFFERINGS

\$80,000 5% Bonds

TOWN OF ST. ELMO, TENN.
Sealed proposals will be received by H. B. Wilson, Mayor, until 4 o'clock P. M. October 24, 1911, for \$80,000 30-year Sewer Bonds of \$1000 denomination, dated November 1, 1911, interest 5 per cent., payable November and May 1, semi-annually.

A certified check for \$1000 required, payable to F. A. Seagle, Treasurer.

The Commissioners reserve the right to reject any or all bids.

Bond Sale

Bids will be received by the undersigned until 2 o'clock P. M. November 1, 1911, for \$12,500 of bonds of the Town of Jennings, Florida, to bear interest at 6 per cent. per annum; interest payable semi-annually; said bonds to run for 30 years.

The right is reserved by the Town Council to reject any and all bids.

For further information address the undersigned Clerk.

J. C. Barnes,
Clerk for Town of Jennings,
Jennings, Florida.

\$160,000.00 City of Winston
Bonds

Sealed bids will be received by the City of Winston, N. C., until 12 o'clock M. of the 26th day of October, 1911, for an issue of one hundred and sixty thousand dollars par value, 4½ per cent. Improvement Bonds, bearing date October 1, 1911, payable forty years after date, each of the denominations of \$1000; principal and interest payable at the Wachovia Bank & Trust Company, Winston, N. C., or at such other place as the purchaser may require; interest payable semi-annually.

Each bid for the above bonds or portions thereof must be for a sum not less than par and accompanied by a certified check, payable to William D. Jackson, Treasurer of the City of Winston, for 2 per cent. of the par value of the bonds bid for; money to be paid and bonds delivered at Winston, N. C. Full particulars given on request.

WILLIAM D. JACKSON, Treas.,
City of Winston, N. C.

\$74,000.00 5% Refunding Electric-Light and Water-Works
Bonds of the Town of Wilson,
North Carolina.

Mayor's Office,

Wilson, N. C., September 7, 1911.
Sealed proposals will be received by the Clerk of the Board of Commissioners of the town of Wilson, N. C., until January 1, 1912, at 12 o'clock M., for the purchase of \$74,000 5 per cent. coupon bonds, known as "Refunding Electric-Light and Water-Works Bonds of the Town of Wilson." Said bonds to mature 30 years after date of issue, and interest made payable semi-annually at the office of the Treasurer of the Town of Wilson or at some bank in New York city, at the option of the purchaser. Each proposal must be accompanied by a certified check for \$1000, payable to the order of the Treasurer of the Town of Wilson, as a guarantee of good faith, and to be forfeited to the said Town of Wilson no damages in the event of the failure of the successful bidder to comply with bid within ten days from the opening of said bids.

The right is reserved to reject any and all bids. For further information address

THEO. A. HINNANT,
Clerk Board Commissioners,
Wilson, N. C.

\$100,000 Cocke County (Tennessee) Road Bond Issue

Sealed bids will be received by the undersigned until 2 o'clock P. M. October 28, 1911, for \$100,000 bonds of the denomination of \$1000, dated January 1, 1912, bearing 5 per cent. semi-annual interest, January 1 and July 1, and payable as follows:

Four thousand (\$4000) dollars in five years, and

Four thousand (\$4000) dollars each succeeding year thereafter until all are paid.

Principal and interest payable at the office of the Trustee of Cocke County, Tennessee, or at a national bank in the city of New York, at the option of the holder.

Each bid must be accompanied by a certified check of \$3000 on a reputable bank, payable to Cocke County Pike Commission.

The right is reserved to reject any and all bids.

Bids and inquiries should be addressed to GEO. W. GORRELL,
Secretary of Commission,
Newport, Tennessee.

COCKE COUNTY PIKE COMMISSION,
John Weaver, Chairman;
Geo. W. Gorrell, Secretary;

R. M. Jones.

\$25,000 5% Bonds

Sealed bids (at not less than par) will be received up to October 23, 1911, at 2 o'clock P. M., for \$25,000 water-works bonds of the City of Dayton, Tennessee, to mature in thirty (30) years, with interest at 5 per cent. payable semi-annually. For any information address Euclid Waterhouse, Secy.-Treas., Dayton, Tennessee.

\$60,000 6% Water-Works Bonds

Sealed bids will be received by the Town Clerk of Halleyville, Okla., until 4:30 P. M. October 23, 1911, for the purchase of sixty thousand (\$60,000) dollars water-works bonds, payable in 25 years and bearing 6 per cent. interest, payable semi-annually.

The town reserves the right to accept or reject any or all bids.

J. P. CREASY,
Clerk.

Sale of Refunding Bonds

Notice is hereby given that sealed bids will be received by J. E. Swain, Asheville, N. C., Attorney for the Board of County Commissioners of Buncombe County, up to 12 o'clock noon on Tuesday, November 7, 1911, for an issue of refunding bonds of said county in the sum of fifty thousand (\$50,000) dollars, and payable twenty years after date, with interest at the rate of five per cent. (5%) per annum from date of issue, payable semi-annually.

Any question as to the validity of said issue to be submitted to the Supreme Court at the expense of the county.

Purchaser must refund accrued interest on bonds to date of payment for same.

The county reserves the right to reject any and all bids.

Certified check of five per cent. (5%) must accompany bid. No private bank or banker's check.

Full information with regard to tax valuation, population and indebtedness of the county will be furnished upon application to the undersigned.

J. E. SWAIN,
County Attorney.

Asheville, N. C.

Notice

Notice is hereby given that the County Commissioners of Jackson County, Florida, on Tuesday, the 17th day of October, A. D. 1911, the same date being within thirty days from the publication of this notice, will receive bids for the purchase of County Bonds at the office of the Clerk of the Circuit Court of Jackson County, Florida, the said offer for sale being bonds authorized by an election held on the first day of August, 1911. The total amount of this bond issue is three hundred thousand dollars. The total amount of the bonds offered for sale and to be bid for at this time, par value, is one hundred thousand dollars, bearing interest at the rate of five per cent. per annum, interest payable on October 1st annually, principal payable at the expiration of forty years from October 1st, 1911. Both principal and interest are payable at the office of the County Treasurer of Jackson County, Florida.

The Commissioners reserve the right to reject any and all bids. No bond will be sold for less than ninety-five per cent. of its par value.

For further information apply to W. A. McRae, Clerk of the Circuit Court, Marianna, Jackson County, Florida.

C. E. SIMMONS,
Chairman Board County Commissioners,
Jackson County, Florida.

Attest:

W. A. McRAE,
Clerk Circuit Court Jackson County, Florida,
and ex-officio Clerk Board County
Commissioners Jackson County, Florida.
Marianna, Florida, September 21, 1911.

\$70,000 6% Bonds

NOTICE

Notice is hereby given that the County Commissioners of Walton County, Florida, on Tuesday, the 7th day of November, A. D. 1911, at 12 o'clock M. on said day, will receive sealed bids for the purchase of the bonds for Special Road and Bridge District No. 1 of said County of Walton, at the office of the Clerk of the Circuit Court of Walton County, Florida. The said offer for sale being bonds authorized by election held on the 8th day of August, A. D. 1911, the total amount of this bond issue being seventy thousand (\$70,000) dollars. The total amount of bonds offered for sale and to be bid for at this time, par value, is seventy thousand (\$70,000) dollars, bearing interest at the rate of six (6%) per cent. per annum; interest payable semi-annually on the first of June and first of December of each year; principal payable at the expiration of twenty years from date of bonds, said date being November 1, 1911; both principal and interest are payable at the office of the County Treasurer of Walton County, Florida.

Any and all bids may be rejected if the County Commissioners shall deem it for the interest of the county to do so.

For further information apply to Chas. H. Gordon, Clerk Circuit Court, Postoffice De

De Funiak Springs, Walton County, Florida.

J. D. RUSS,

Chairman Board County Commissioners,
Walton County, Florida.

Attest:

CHAS. H. GORDON,
Clerk Circuit Court, Walton County, Florida,
and Ex-Officio Clerk Board County
Commissioners, Walton County, Florida.
De Funiak Springs, Fla., October 9, 1911.

6% Bonds For Sale

The Snow Flake Lime & Rock Company of Fort Spring, W. Va., offers for sale 6 per cent. bonds maturing in ten and twenty years, secured by mortgage on their plant.

For full information address

JOHN S. CRAWFORD, Pres.,
Lewisburg, W. Va.

MISCELLANEOUS

Proposals for Street Paving

Sealed proposals will be received by the Board of Commissioners of Improvement District No. 180, City of Little Rock, Ark., until 12 o'clock M. of October 24, 1911, for grading, curbing, draining and paving with asphalt or an asphaltic type of pavement approximately 35,500 square yards of pavement.

Bids will be received by the Secretary of the district, Mr. W. C. Foster, 301 Main St., Little Rock, Ark.

Proposed forms and specifications may be obtained from Ford & MacCrea, Engineers in charge, 338-40 Gazette Bldg.

The right is reserved to reject any or all bids.

Water-Works and Sewers

JELICO, TENN.

Sealed proposals will be received by the Water-works and Sewer Commission until two P. M. November 1, 1911, for either or all of the following items, approximately: (a)

1169 tons cast-iron pipe; (b) 70 hydrants, 80 valves; (c) 50,000-gallon reinforced concrete reservoir; (d) laying 12½ miles 3" to 10" pipe; (e) headworks at springs; (f) constructing 5.7 miles 8" to 15" pipe sewers with necessary accessories. Certified check 3 per cent. amount of proposal. Right is reserved to reject any or all bids. For specifications address Walter G. Kirkpatrick, Engineer, Jackson, Miss. A. B. Mahan, Secretary.

Bridges

NOTICE TO CONTRACTORS.

The Commissioners' Court of Brazoria County, Texas, will receive sealed bids up to twelve o'clock noon of Wednesday, the 1st day of November, 1911, at the office of Hon. J. W. Munson, County Judge of said county, at Angleton, Texas, for the furnishing of all materials and labor required to construct, erect and complete ready for use two bridges over the Brazos River, one at Columbia and one at Brazoria, in accordance with approved plans and specifications on file at the office of said County Judge. Bids will be opened in the afternoon on the above-named date.

Contractors shall submit bids in lump sum for each bridge separately, and for both bridges taken together. The bid for each bridge must be accompanied by a certified check for \$3000, payable to J. W. Munson, County Judge, as surety that if awarded the contract for the work the contractor will enter into a valid contract and furnish satisfactory bonds in amount of the contracts.

Contractors are requested to visit the two locations before submitting bids.

Duplicate sets of plans and specifications may be secured from F. S. Rice, Engineer, Sweeten, Texas, on written application, accompanied by check for \$10, which check will be returned to unsuccessful bidders on receipt of bids as above and return of plans.

\$100,000 4 per cent. gold bonds issued by county to pay for bridges; interest payable semi-annually; due 40 years after date; redeemable after five years; dated April 10, 1911. Contractors will submit bids for the work payable in bonds in installments as work progresses.

The Court is desirous that actual construction be commenced as early as possible, and all contractors shall specify in their bids the time at which active work will be commenced and when completed.

Said Court reserves the right to reject any and all bids, and the successful bidder or bidders will be required to guarantee the work for ten years.

J. W. MUNSON,
County Judge.

Irrigation Canal

San Antonio, Texas.

Sealed proposals will be received by the Medina Irrigation Company, 520 East Houston St., San Antonio, Texas, until 3 P. M. October 20, 1911, for the building of twelve or more contract sections of its west canal, located about 23 miles west of San Antonio, and having an aggregate length of approximately 28 miles. Canals will have bottom widths of 20 ft. in level grounds, 15 ft. in sidehill work, 10 ft. in concrete-lined channels, and will include approximately 1,400,000 cubic yards of classified excavation material, two reinforced concrete siphons, concrete culverts, flume approaches, and bridge crossings. Contract sections will be approximately of equal magnitude. Bidders will be required to qualify as to past performance and ability to furnish adequate plant. Each bid must be accompanied by certified check for five per cent. of the amount bid and by guaranty from responsible surety company that bidder, if successful, will execute satisfactory bond in sum of fifteen per cent. of amount of bid, guaranteeing to complete work before July 1, 1912. The right is reserved to reject any or all bids. Bidders are expected to go over the ground, examine testpits and inform themselves regarding all local conditions.

Further information, blank forms for proposals and detailed plans and specifications may be obtained by responsible parties from the Company at the above address and at its New York Office, 20th floor, 25 Broad St., New York City.

MEDINA IRRIGATION CO.

Pumping Machinery and Laying Cast Iron Pipe, Etc.

Charlotte, N. C.

Sealed proposals will be received by the Board of Water Commissioners of the City of Charlotte, at the office of the Clerk, until 3 P. M. October 17, 1911, for the following:

Laying about 9 miles of 24-inch cast-iron pipe.

Furnishing valves.

Furnishing two 350-horse-power motors.

Furnishing two centrifugal pumps (5,000,000 gallons capacity each).

Furnishing one 3,000,000-gallon steam pump.

Furnishing transformers and switchboard.

Bids for other work and materials will be advertised for later.

Plans and specifications will be on file at the office of the Clerk and at the Engineer's office in Charlotte, N. C.

Copies of specifications, form of proposal, etc., will be furnished on deposit of \$5, which deposit will be refunded on return of same. Map and profile of pipe line will be furnished on payment of \$5.

As an evidence of good faith, each bid must be accompanied by a certified check for not less than 10 per cent. of the amount of bid; but check is to be for \$5000 if bid is on laying pipe line.

The right is reserved to reject any or all bids.

BOARD OF WATER COMMISSIONERS.

A. H. Wear, Clerk.

Engineer:
GILBERT C. WHITE.

Notice to Architects

Plans and specifications for the proposed buildings of the State Normal and Industrial School for White Women in the city of Radford will be received by the Board of Trustees of the School at a meeting to be held in Richmond, in the Capitol, on Tuesday, November the 14th, 1911. It is contemplated that the cost of the buildings will be one hundred and fifty to two hundred thousand dollars.

The location and relative situation of the Administration building and Dormitories should be indicated in the plans.

Blueprints may be had from Capt. W. T. Baldwin or the undersigned, by parties interested, of the site.

The Board reserves the right to reject any and all plans, and does not assume any responsibility or cost whatsoever, except to the Architect whose plans may be adopted.

The plans, in a sealed package, may be mailed to the undersigned at East Radford, or delivered to him in Richmond on the 14th of November.

By order of the Board.

G. E. CASSEL, Secretary.

East Radford, Va., October 9, 1911.

ADVERTISEMENTS
TOO LATE FOR
CLASSIFICATION.

WANTED

Party with crushing plant to crush stone by cubic yard.

B. F. POPE,

703 Law Bldg., Baltimore, Md.

GAS PLANT WANTED

Elizabeth City, North Carolina, population about nine thousand (9000), will on November 9th, 1911, at 7:30 P. M., hear proposals from all those who want franchise to install gas plant.

Address J. B. FLORA, Mayor.

These Advertisements

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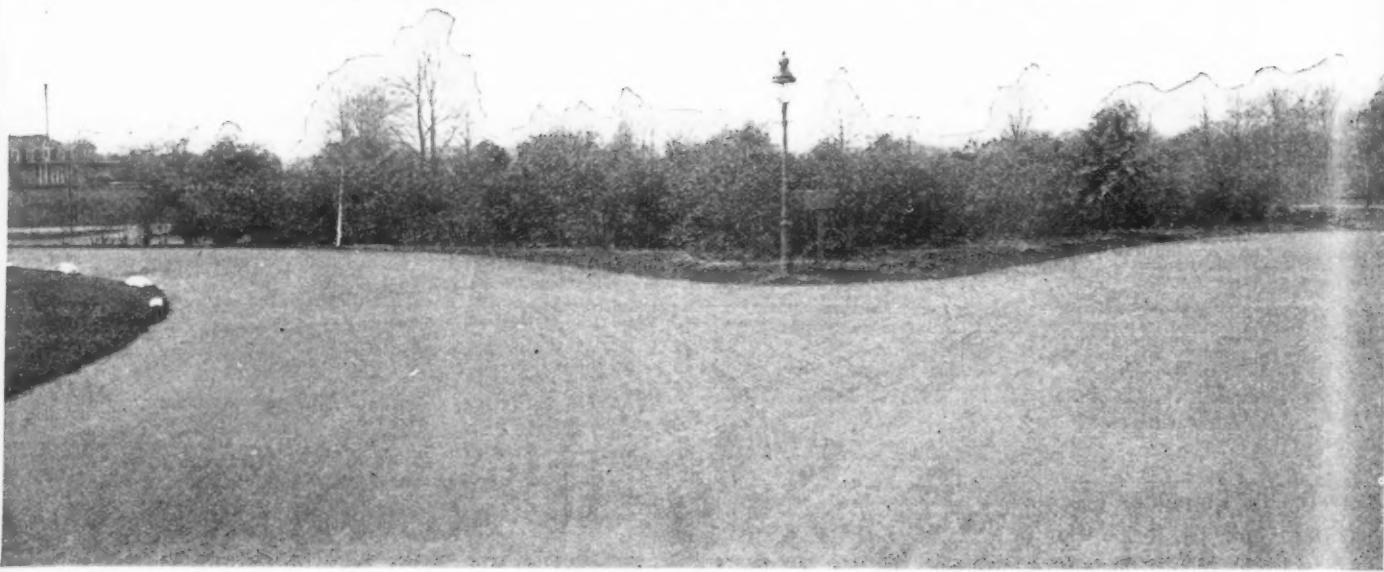
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Tarvia

*Preserves Roads
Prevents Dust-*



Entrance to Branch Brook Park, Newark, N. J. Roads Constructed with Tarvia X.

Meets Modern Road Requirements.

TARVIA is a powerful binder for the surfaces and foundations of macadam roads. It fills the voids and locks the stone in a tough, durable, plastic matrix.

A Tarviated surface looks like sheet asphalt and is equally dustless and clean. It sheds water readily and is dry immediately after the rain, so that pedestrians are not inconvenienced. The surface never gets muddy or dusty.

On account of the Tarvia matrix, these roads will bear heavier automobile traffic than plain macadam because the surface yields instead of pulverizing under the strains. The Tarvia matrix prevents internal movement and grinding.

The plasticity of the Tarvia also makes these roads very quiet. Horses' hoofs make almost no sound on a Tarviated road. Tarvia is waterproof, and Tarviated roads, therefore, are protected against damage from torrents on grades.

Tarvia has no odor except when being applied. After it hardens, it has no injurious effect on shoes, clothing or vehicles. The cost of using Tarvia is not a factor for consideration, because it has been repeatedly demonstrated that it is cheaper to maintain a dustless road with Tarvia than a dusty one without it. Maintenance economies more than balance the additional cost.

Booklets on request. Address our nearest office.

BARRETT MANUFACTURING COMPANY

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	Pittsburg
Cincinnati	Kansas City	Minneapolis	New Orleans	Seattle	London, Eng.	
Canadian Offices:—Montreal, Toronto, Winnipeg, Vancouver, St. John, N. B., Halifax, N. S.						



Special Advertisements of General Interest.

"TIMBER TO BURN"

We have on our list some of the biggest bargains in tracts of timber, both soft and hard woods, that it has been our pleasure to offer the public, and intended buyers will do well to get our list.

We also have several coal properties for sale.

BELLER & WILSON

Headquarters for Timber and Coal. 402-404 Nat. Exchange Bank Bldg., ROANOKE, VA.

An Up-to-date Wood Working and Saw Mill Plant for Sale

Complete in every particular. Covering 2½ acres of land in the center of Norfolk, now doing a business of over \$100,000 per year. For sale cheap.

Details furnished on application.

ABBOTT MORRIS & CO.

NORFOLK, VA

GEORGIA FARM LAND FOR SALE

About 10,000 acres fertile farm land within 35 miles of Savannah, Georgia; healthy location and good water, suitable for colonization. A good stand of yellow pine timber, estimated at 20,000,000 feet and thousands of cords of wood. Located for seven miles on two main line railroads, giving low freight rates, secured by water transportation competition, to Northern markets, with all-year markets close at hand. Will not divide tract. Will sell outright or put in property and take interest with financially able developing company.

W. W. ROBERTSON, Owner

NORFOLK, VA

WATER-FRONT PROPERTY IN VIRGINIA

Suitable for factory development or private investment. 7½ acres high land, 6½ acres open water, with a fine water-frontage of 1426 feet on Deep Creek near Gilmerton, close to Navy-Yard and not far from City of Portsmouth.

This excellent water-front property will become very valuable in the near future. At present there are railroad facilities within 500 yards. Will sell to quick purchaser for \$150.00 per acre.

S. L. NUSBAUM & CO.

Suite 600 Citizens' Bank Bldg., Norfolk, Va.

WANTED Location for Silk Mill

Silk Mill.—An old-established firm wishes to start a branch mill in the Middle South where plenty of good labor and cheap power can be obtained. Would employ 300 or more. Give full particulars in reply. Address Silk Co., care Manufacturers' Record.

Stone Quarry & Crushing Plant FOR SALE

Location, Wake county, North Carolina. Steady demand for entire output at good prices. No other quarry in this section. Capacity, 300 tons crushed stone per day. Will sell cheap.

AMERICAN STONE CO.,
P. O. Box 538, Richmond, Va.

FOR SALE

October 31, 1911

Under Decree of the U. S. Court, Norfolk

The Site of the Jamestown Exposition, near the City of Norfolk, Va., about three hundred and thirty acres, fronting more than a mile on Hampton Roads, just opposite Old Point Comfort, and adjoining the property of the Virginian Railway in its rear, including many permanent buildings adapted for manufacturing and residence purposes, and piped for water and sewerage.

To be offered in parcels and as a whole.

For full information apply to any of the undersigned Commissioners of Sale.

JOHN L. JEFFRIES

RICHARD H. BAKER

ROBERT B. TUNSTALL

H. H. RUMBLE

R. M. LETT

O. D. BATCHELOR

NORFOLK, VA.

NEWPORT NEWS, VA.

IF YOU ARE A MANUFACTURER AND WANT A GOOD SITE

let us tell you why you should investigate the sites we have for sale in **CANTON, the Industrial Suburb of Baltimore**.

First-rate rail and water transportation. Fuel and raw material for almost any kind of industry readily obtained. Good labor securable. Right in the midst of a thriving manufacturing center. Southern market near and easily reached. In every respect these sites meet the requirements of modern commerce.

We will gladly go into detail with those interested.

J. LINDSAY CLARK & CO.

State Bank of Maryland Building

BALTIMORE, MD.

PLANING MILL FOR SALE

Planing mill equipped with good, up-to-date machines, such as S. A. Ward Flooring Machine No. 24.

10-inch Hermance Molder.

Hermance Double Surfacer, 8x24.

10-foot tower trimmer.

Dusting system complete.

Erie City "automatic" 125 H. P. engine, etc., etc.

This plant is located one and one-half miles east of Marion, at the junction of C. C. & O. and Southern Railways, with siding facilities from both lines—in the midst of a number of sawmills in operation and lumber within wagon delivery limits. Plant has large steam-heated dry-kiln, good as new—plant has been operated about a year. Terms reasonable. Price, a bargain. Will not sell machinery separate. If interested, write J. W. Streetman, Marion, N. C.

Iron Furnace, Pipe Foundry, Ore Beds and Standard Gauge Railroad

FOR SALE OR LEASE

The Prison Commission of Texas offers for sale or lease the iron furnace, pipe foundry and ore beds at Rusk, Texas; also thirty-two (32) miles of standard gauge railroad, running between Rusk and Palestine. Will lease or sell furnace, foundry and ore beds separate from railroad, or vice versa.

Full particulars may be obtained by addressing

BEN E. CABELL
Chairman Prison Commission
Huntsville, Texas

Notice of Public Sale by the Trustee of the Property of the

GEORGIA COTTON MILLS

of Dublin, Laurens County, Georgia

Notice is hereby given that the undersigned Trustee, under that certain Mortgage Deed of Trust executed by the Georgia Cotton Mills, a corporation of Dublin, Laurens county, Georgia, on the first day of March, 1909, recorded in the office of the Clerk of the Superior Court of the said county of Laurens in Book 54, pages 19 et seq., to secure the issue of bonds therein mentioned, and also as Trustee under that certain other Mortgage Deed of Trust executed by the said Georgia Cotton Mills on the first day of October, 1910, recorded in said Clerk's office in Book 58, pages 510 et seq., to secure the issue of bonds therein mentioned, default having occurred under the provisions of both mortgages, will sell at public outcry, to the highest and best bidder, and in accordance with the terms and provisions of the said Mortgage Deeds of Trust, at Dublin, Laurens county, Georgia, before the County Courthouse door, between the legal hours of sale, on the first Tuesday in December next, to wit, on Tuesday, December 4, 1911, all the property described in the said two Mortgage Deeds of Trust and mortgaged or intended to be mortgaged thereby, to wit:

That tract of land containing sixty-three and sixty-five hundredths (63.65) acres, more or less, situated in said county of Laurens, State of Georgia, in the three hundred and forty-second (342) district G. M., and being a part of lot of land number one hundred and sixty-four (164), and described in a plat recorded with a deed from W. W. Robinson to the Dublin Cotton Mills, dated November 29, 1899, in the office of the Clerk of the Superior Court of Laurens County in Book 8 of Deeds, folios 54 and 55; also that tract lying in the First Land District of Laurens county, Georgia, known as the Robinson Mill Place or Lot, containing twelve (12) acres, more or less, less two (2) tracts of two (2) acres each sold off from said tract; also that tract containing two (2) acres, more or less, being in the First Land District of said Laurens county. The cotton-mill buildings and machinery of the said Georgia Cotton Mills being located on said property.

Also, all the entire textile machinery of every character located in the cotton-mill buildings on the above-described premises, comprising what is known as machinery for an eight thousand (8000) spindle mill, two hundred and sixty (260) looms, made by the Lowell Machine Shop, including the auxiliary machinery, mill fixtures, engines and boilers, belts, pulleys, shafting, tools, lathes, drills, electric-light engine and dynamo, elevator, fire apparatus and mill supplies.

All of the property of the Georgia Cotton Mills, mortgaged or intended to be mortgaged by said Mortgage Deeds of Trust, will be sold, and reference is made to the said two mortgage Deeds of Trust for a more particular and full description of the said property.

Said sale being made in order to collect the principal and interest of all of the bonds secured by said two mortgages, and all taxes, disbursements, incident to the preservation and protection of said property, expenses, fees, commissions and costs, as provided in said two mortgages.

Terms cash. Purchaser paying for title.

This August 28, 1911.

THE CITIZENS' AND SOUTHERN BANK,

By M. B. Lane, President,
Trustee,
Savannah, Georgia.

ADAMS & ADAMS,
Attorneys for Trustees,
Savannah, Ga.

**VALUABLE
WEST VIRGINIA TIMBER
FOR SALE**

The undersigned, appointed Receiver by the U. S. Circuit Court at Clarksburg, in the suit of David Burns et al. vs. Jno. K. Thompson, Marshal and others, hereby offers for sale all the timber standing on the following tracts of land belonging to the estate of David Burns, and G. W. Burns, and of Burns Bros.:

1. About 2300 acres in Upshur county, West Virginia, lying on Right and Left forks of the Little Kanawha River in several contiguous parcels, known as the Burns lands. This land is well timbered and retains in virgin forest, except as to large poplar, which was removed twenty years ago.

2. About 1050 acres in Braxton county, West Virginia, lying on waters of Gulf Run and England Run, tributaries of Little Kanawha River. This body of land, also, made up of several contiguous parcels, is known as Burns lands. The larger poplar and oak have been removed for over twelve years, but much valuable timber still stands.

The titles to all of these lands are believed to be perfect.

Sealed bids will be received by me at Parkersburg, West Virginia, until noon on the 15th day of December, 1911, for all the timber on one or both of the two tracts above mentioned, and the right is reserved to reject any and all bids.

Each bidder shall name a gross sum for all the timber per tract or tracts.

Terms: One-third cash, and balance in six and twelve months, with interest on notes with good security. Two years allowed from date of decree confirming sale for removal of timber.

WALTER E. FLEMING, Receiver,
Parkersburg, W. Va.
VAN WINKLE & AMBLER,
Counsel.

30-Ton Triumph System Ice Plant For Sale

Complete and in shipshape. Installed in reinforced concrete building and near the heart of the city of Sweetwater, Texas, the best and fastest-growing city in Texas west of Fort Worth. Six thousand people now. Three trunk-line railroads. Shops and general division of the Santa Fe cut-off from Galveston to the Pacific Coast. Negotiating now for icing contract with Santa Fe. Interested in an ice plant that will make money? Better investigate this. We want to give our attention to water-works improvement only. No other plant here. Address BEN ANTHONY, Sweetwater, Texas.

**AUCTION SALE
OF
Valuable Property in Norfolk, Va.**

By virtue of two decrees entered, respectively, on July 13, 1911, and July 29, 1911, in the suit pending in the Court of Law and Chancery of the City of Norfolk, entitling William Thomas Core and others against Bovee Dodds Core and others, we, the undersigned, who were appointed Special Commissioners for that purpose, will sell at public auction at the Norfolk Real Estate and Stock Exchange, Plume street, Norfolk, Virginia, on

TUESDAY, OCTOBER 24th, 1911, at 12 M.

the following real estate, located in the City of Norfolk, Virginia, of which John H. Core died seized and possessed:

Those certain tracts or parcels of land containing in the aggregate 85,159 acres, more or less, lying along Armistead Bridge road, adjoining Gandy, laid down on a plat filed as "Exhibit C," with the bill in the above-mentioned suit made by W. T. Brooke, City Engineer, for John H. Core, in July, 1908, reference being made to said plat for a more particular description of the land.

Sales are to be made subject to confirmation by the above-mentioned Court.

The terms and conditions of sale and plats showing said property can be obtained from any of the undersigned Special Commissioners or Auctioneers.

WM. W. OLD, JR.,
A. W. PATTERSON,
L. CLAY KILBY,
Special Commissioners.
H. C. HOGGARD & CO.,
STEPHENSON & TAYLOR,
C. N. WHITEHURST & CO.,
Auctioneers.

**10,000 Acres Pine, Gum and Cypress Timber Land
FOR SALE**

10,000 acres fine timber land—Pine, Gum and Cypress. Will cut 40,000,000 feet. Six to twenty years cut. Timber of finest quality. Located on railroad and river. Mill, nearly complete, including two Drykilns, Planing Mill, Shingle Mill, etc. None of the timber over five miles from mill. Cheap logging. Freight rates to Virginia gateway, 12 cents. For further information address
"TIMBER,"
P. O. Box 328, Fayetteville, N. C.

**Crushed Stone Quarry
FOR SALE**

Quarry located at Rockfish, Nelson County, Virginia, with a direct siding, in good condition, to the main tracks of the Southern Railroad Company.

In the past the Quarry has furnished ballast and screenings to the Southern Railroad Company.

Summary of Machinery, etc., at time of last Inventory

- 2 Austin Gyratory Crushers, one No. 7½, one No. 4, Screen and Elevator.
- 1 Sullivan Compressor, No. 212.
- 2 Ames Locomotive Boilers.
- 1 Houston, Stanwood & Gamble Engine, 12" x 16", with 3½" Steam Connection.
- Feed Water Heaters.
- Worthington Feed Pump.
- 1 Air Receiver.
- U. H. and Baby Drills.
- 4 Hardsocg Drills.
- Screens, Belting, Shaftings, Elevator, Etc.
- Engine House, Boiler and Compressor House.

Note: There is a long lease effective on this property, calling for a rental of \$5.00 per annum when the plant is not in operation, and 1 cent per cubic yard for all rock quarried when being worked.

For Particulars Address:

ASHTON G. CLAPHAM

Commercial Bank Bldg.,

WASHINGTON, D. C.

**Hardwood Timber
FOR SALE**

The Hardwood Timber, consisting of Ash, Hickory, Gum, Elm and Hackberry, on 16,000 acres of land; splendid shipping facilities, railroad passing through the land.

A good handle and slack stave proposition.

Timber must be moved in order to clear land.

For particulars write

**Mann Land & Improvement Co.
TEXARKANA, ARK.-TEX.**

Complete Saw Mill Plant, Dry Kiln and Logging Equipment

FOR SALE

Mill has a daily capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

**Woodworking Plant
FOR SALE**

Over 80,000 square feet of floor space, with up-to-date equipment of door, trim and planing-mill machinery; steam heated; electric lights and automatic sprinklers; both steam and electric power; large and modern drykilns and plenty of yard room. It is located on the Hudson river and two lines of railroad, with siding in yards, and 1000 feet of canal dock. First-class shipping facilities; shipment by freight to New York and Boston in forty-eight hours. Labor easily secured and a desirable place to live. This plant easily adapted to any kind of woodworking, such as flooring mill, shuck or furniture factory and similar lines. This is a rare opportunity to secure an up-to-date manufacturing plant in a fine location. The property must be sold quickly. If interested, address

WM. L. HOWLAND, Trustee,
Mechanicsville, N. Y.

**Sash, Door and Blind Factory
FOR SALE**

Machinery, tools, fixtures and good-will of a factory making sash, blinds, doors and other building material in one of the largest and most progressive cities in the South. It is one of the best equipped factories in the South and has an established reputation for high-grade work. For further information address Manufacturer, care Carrier No. 1, Richmond, Va.

**Centrifugal Pump Business
FOR SALE**

A Centrifugal Pump Business, established thirty years. Will sell patterns, templates, good will, machinery and plant, all or any part.

ADDRESS

**VAN WIE PUMP CO.
SYRACUSE, N. Y.**

FACTORY FOR SALE

ADRIAN, MICH.

Consisting of three buildings, 42,000 square feet, and three acres of ground, with engine boiler and heating apparatus. Good switching facilities. Apply

W. D. BIGGERS
1120 Penobscot Bldg. DETROIT, MICH.

FACTORY FOR SALE

Located 30 miles from New York City, with tidewater dock and water rights. One and one-third acres land. Factory building 27,470 sq. ft. floor space. 100 H. P. gas producer power plant.

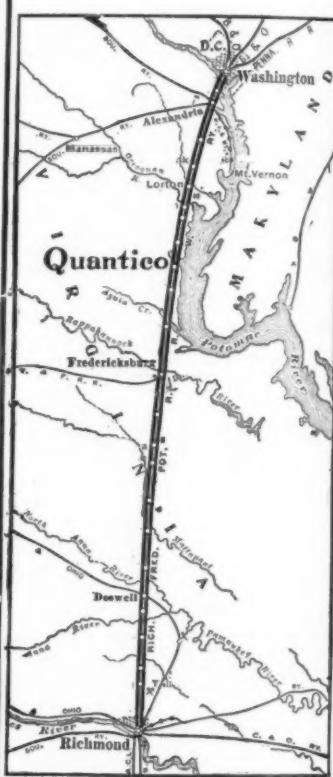
MIANUS MOTOR WORKS,
Stamford, Conn.

**NOTICE
On the Map**

that Quantico is on
main line between

**Washington
and
Richmond**

conecting with the B. & O. and Pennsylvania on the North and main Southern lines on the South, affording rail facilities to any part of the country; also on Potomac River with deep water transportation.



**FINE
Industrial
Sites**

at Quantico, Va.

Large deposits high-grade clay—good chance for brick and clay industries. All kinds of wood, offering handle works, chair factories and woodworking plants generally a fine opportunity. Favorable locations for knitting mills also.

Plenty cheap labor and no local taxation.

New manufacturing district.

Details gladly furnished by

**H. B. HUTCHISON
Colorado Bldg., WASHINGTON, D. C.**

Bargains in Machinery and Supplies.

Rebuilt Engines and Boilers

Engines—Corliss.—18x42 Lane & Bodley, 18x42 Ohio Heavy Duty, 16x42 Atlas, 12x36 Lane & Bodley.
Engines—Automatic.—14 $\frac{1}{2}$ x24 Buckeye, 13x22 Buffalo Compound, 13 $\frac{1}{2}$ x15 Taylor, 12x16 Atlas, 13x12 Harrisburg-Ideal, 13x12 Phoenix, 12x16 Green, 12x12 Armington & Sims, 11x16 Sims, 10x12 Valley, 8x14 Noyes.
Engines—Throttling.—18x24 Atlas, 14x18 Sinker-Davis, 14x14 Lewis Vertical, 12x16 Reed, 12x14 Brownell, 10x16 Bass, 10x12 Atlas, 8x14 Lane & Bodley, 8x10 Erie, 6x8 Industrial.

Boilers—Stationary.—72x18 Standard, 72x16, 66x16 High Pressure, 72x18 Standard, 72x16, 66x16 High Pressure, 15x16 New York Safety Center Crank, 15x16, 6x14, 48x14, 44x14, 44x12, 42x12, 36x16, etc.

Boilers—Fire Box.—100, 80, 60, 50, 40, 35, 30, 25, 20, 16, 12, 10 and 8 H. P., etc.

Boilers—Vertical.—50, 40, 35, 30, 25, 20, 16, 12, 10, 8, 5 and 3 H. P., etc.

Heaters.—All sizes, Open and Closed.

Pumps.—All sizes, Single and Duplex.

Electrical.—30 K. W. Generator, direct connected to 8x10 Skinner Engine; 20 K. W. Generator, direct connected to 8x10 Economic Engine; 18 K. W. Belted Generator.

Miscellaneous.—Sawmills, Lath Mills, Edgers, Cut-off Saws, Re-Saws, Blowers, Exhaust Fans, Tanks, etc. Write for list. Also full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Jet Pumps. Send for circular.

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1734 Powers Street • CINCINNATI, OHIO

Second-Hand Machine Tools For Sale at Bargain Prices

LATHES

One 24"x8' Five-Step Cone-Head q. e. g. Lodge & Shipley Engine Lathe.
 One 3 $\frac{1}{2}$ "x60" Fitchburg Lo-Swing Lathes.
 One No. 3 Lodge & Shipley Rapid Reduction Lathe with 8' bed.

PLANERS

One 36"x36"x10' Three-Head Sellers.
 One 36"x36"x26' Four-Head Sellers.
 One 42"x45"x20' Single-Head Putnam.

MISCELLANEOUS

One Whiton Revolving Centering Machine.
 One Franklin Cold Saw, 3 $\frac{1}{2}$ " capacity.
 Two No. 2 Nutter-Barnes Cold Saws, 6" capacity.
 One Schuster 14" Riveter, Model "A".
 One Mumford 12"x40" Power Ramming Molding Machine.
 One Globe Power Hack Saw, 8" capacity.
 One Universal Power Hack Saw, 6" capacity.

THE LODGE & SHIPLEY MACHINE TOOL CO.
Cincinnati, Ohio, U. S. A.

Hoisting Engine FOR SALE

Two three-drum tandem Lidgerwood Hoisting Engines, size 14x18, D. C., reverse link motion and friction drums, equally as good as new.

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PHILADELPHIA, PA.

SAW AND ENGINES FOR SALE

One Second-Hand J. A. Fay & Egan Co. No. 14 Band, Rip and Resaw, practically new.

ALSO

Four Steam Engines, various sizes.

The Ober Mig. Co., Chagrin Falls, Ohio

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PIPE for pipe lines, PIPE for drilling,
 PIPE for casing, PIPE for tubing.

Complete stock, sizes 1 to 12".

Also second-hand engines, pumps, boilers, cypress and steel tanks, complete well drilling rigs.

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Planer for Sale

Pond Planer, 50" x 38" x 10'2", two heads on rail, one side head. Weight 17,000 lbs. Price \$850.00 for a quick cash sale. Western Machinery Co., Cincinnati, Ohio.

BARGAINS IN STOCK

Immediate Delivery Rebuilt and Guaranteed

ENGINES

Two (2) 18"x34"x48" Tandem Compound Greene, 150 lbs. steam.
 28"x48" Taylor Corliss.
 25"x48" Wetherill Corliss, 150 lbs. steam; extra heavy.
 22"x48" Taylor Corliss.
 20"x42" Frick "Eclipse" Pattern Corliss.
 16"x36" Greene Corliss.
 One (1) each 14"x16", 16 $\frac{1}{2}$ "x18" and 14"x28" Buckeye.
 15"x16" New York Safety Center Crank.
 Two (2) 9"x15"x9" Westinghouse Automatic Compound.
 Large assortment of Slide-Valve Engines, all sizes.

BOILERS

One (1) 300 H. P. Babcock & Wilcox W. T., 160 lbs. steam.
 One (1) 250 H. P. Sterling, NEW.

Two (2) 200 H. P. Heine W. T.
 One (1) 250 H. P. Berry, 160 lbs. steam.
 Four (4) 72"x18" Horiz. Return Tubular, 125 lbs. steam.

One (1) 66"x16" Horiz. Return Tubular, 100 lbs. steam.
 Large assortment of Vertical and Locomotive Boilers.

AIR COMPRESSORS

18"x18 $\frac{1}{2}$ "x24" Ingersoll-Sergeant.
 14 $\frac{1}{2}$ "x9"x8" Ingersoll, two-stage, belt driven.
 14 $\frac{1}{2}$ "x9"x8"x12" Ingersoll, two-stage, "Imperial" type.
 And many others.

HEATERS

1000 H. P. Berryman Gleaner.
 500 H. P. Cochran.

One (1) each 800 H. P. Wheeler, 600 H. P., 500 H. P., 400 H. P.

300 H. P. Berryman.
 300 H. P. Wetherill.

PUMPS

Two (2) 17"x28"x14"x24" Snow Duplex Pressure Pumps, steel water ends.

One (1) 18"x26"x18" Snow Duplex.
 Two (2) 16"x10 $\frac{1}{2}$ "x10" Worthington Duplex Pumps.

One (1) 8" Morris Centrifugal Sand Pump.
 10"x12" Duplex Double-Acting Smith-Vaile Power.

6"x6" Davis Duplex.

500 H. P. Conover Jet Condenser, complete.
 Vacuum and Condensing Pumps, all sizes.
 About fifty other Pumps of smaller sizes.

MACHINE TOOLS

Large stock. Send for special list. Correspondence solicited.

HERMAN L. WINTERER,
908-910 Beach Street, Philadelphia, Pa.

WE BUY

AND

DISMANTLE

Factories

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Machine Shops

and all kinds of

Industrial Plants

We are always in
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Scrap Iron and Steel

OF EVERY KIND

FRANK SAMUEL

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THE WARNER EQUIPMENT CO. CINCINNATI, OHIO

beg to announce they have purchased the factory of the Cincinnati Equipment Company and will continue in the equipment business and in the operation of its factory, soliciting any repair work in the line of steam shovels, locomotives and contractors machinery.

Mr. P. B. Warner, formerly of the Cincinnati Equipment Company, will be president of the new company and Mr. John R. Warner, secretary and treasurer, and they earnestly solicit the patronage of their old friends, as well as new ones.

Dennison Quality

— FROM —

The Hershey Machine & Foundry Co.
 Manufacturers of THE BAUM STEAM AND OIL SEPARATORS
 GENERAL FOUNDRY AND MACHINE WORK
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Dennison Shipping Tags
 Are as Standard as Steel Rail
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Their high standard has been maintained down through the years since 1863, when Mr. E. W. Dennison, the Founder of the Company, placed on the market the first shipping tag with the Patent Weather-proof Patch.

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 are an economy. The tough, fibrous rope stock of which they are made withstands rough handling and trying climatic conditions.

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TWO SPECIALS

250 H. P. Heine Water-Tube Boiler, 150 lbs. steam pressure, delivery about thirty days..... \$750.00
20x36 Slater Corliss Engine, having tangye frame, wheel 13"x30" face, right hand; cylinder never re bored; engine just like new; immediate delivery..... \$750.00

DUZETS & SON

Hudson Terminal Bldg. NEW YORK
Send for "Bargain List" of

Engines, Boilers, Generators, Etc.

16th and Lincoln Sts., CHICAGO.
We have the largest stock of second-hand electrical machinery in the world. Send for our "monthly Bargain sheet," showing complete stock with no prices. We can save you fully one-third. All machines completely overhauled, tested and shipped practically "as good as new."

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1 84"x84"x20" "Sellers," two heads on cross rail.
1 42 1/2"x40"x15" "New Haven," one head on cross rail.
Both worm drive, in good condition.
We also have a full line of smaller Planers in stock. Send us your inquiries.

L. F. SEYFERT'S SONS, INC.
437-441 North 3d St., Philadelphia.

Engines, Boilers, Generators, etc.

1 22 and 40-36 Corliss Cross Compound.
2 24x18 Corliss Engines.
1 22 and 36-60 Tandem Corliss.
2 Phoenix Tandem 12 and 20x16 Engines.
1 Allis Corliss Tandem, 22 and 24x18 Engine.
Engines direct connected to generators.
SEND for list and prices.

THE DORNER RAILWAY EQUIPMENT CO.
Irving Park Ave., corner Southport.
Chicago, Ill.

FOR SALE CHEAP

Four 100 H. P. Portable Return Flue Boilers, 12"x15", Erie City Engine, 12"x16", Birmingham Engine, 18"x22", H. S. & G. Engine, R. Hand Knife Grinder, 10" Outside Molder.

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Croesotting Cylinder for Sale

For a customer a new croesotting cylinder seventy-two inches in diameter by eighty feet long, built for one hundred and twenty-five pounds pressure. Can be sold at a low price.

The Walsh & Weidner Boiler Co.
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DYNAMOS AND MOTORS

I buy, sell, rent and exchange.
The best and the cheapest.
Let me know what you have for sale and what you want to buy.

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"220 VOLT"
WESTINGHOUSE
MOTORS

Just Purchased

13-10 H. P. D-C Motors, speed, 1325.
Condition like new. Complete equipment.
Also "Spare Parts," 1-Extra Armature, 1-
Set Shunt Field Coils, 3-New Commutators,
Low Prices, Factory Guarantee.

MANY OTHER BARGAINS. SEND FOR

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Special attention to repairs, installations and

reconstruction of Electrical apparatus.

MILLER-OWEN ELEC. CO.
217-219 First Ave. Pittsburgh, Pa.

FOR SALE

One 25"x14" Lathe, One 20"x10" Lathe, One 18"x8" Lathe, One 14"x6" Lathe, One 30 H. P. Traction Engine, One No. 2 B. Koehring Cement Mixer, One No. 1 B. Koehring Cement Mixer, One No. 1 Smith Mixer, with gasoline engine, One No. 1 Smith Mixer, with boiler and engine, Two 125 H. P. Hor. Tub. Boilers, Two 110 H. P. Hor. Tub. Boilers, One 90 H. P. Portable Boiler on skids, Three Berlin Planers and Matchers, 4"x3", One Mississippi Planer and Matcher, 4"x14". CHAS. T. LEHMAN, Birmingham, Ala.

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Generators and Motors
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RIKER MACHINERY CO.
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100 H. P. Engine**FOR SALE**

One McEwen Center-Crank Engine, 18x14, normal 100 H. P. This engine is in the very best of condition and is for immediate delivery. Will sell at less than real value to quick buyer.

ELECTRIC LIGHTING PLANT,
Johnston, S. C.

DYNAMOS and MOTORS**Direct Connected Units****Belted Generators****Alternating Current Motors****Direct Current Motors****300 OF THEM**

Thoroughly overhauled and fully guaranteed.

In stock for immediate delivery.

We Buy, Sell, Repair, Rent or Exchange.

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FOR**REAL BARGAINS**

Send for my NEW 24-PAGE STOCK BOOKLET of Air, Steam and Electrical Power Equipment and Machinery.

Power W. J. LINTON Plants
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AN ELECTRIC JIB CRANE**FOR SALE**

20.0 radius, 40.0 sweep, all iron, with two motors and all wiring, ready to set up and run; lifting power 5 tons. The motors are 25 and 10 H. P. Address

J. T. SEVERNS' SONS & CO.,
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WANTED—SECOND-HAND ICE MACHINE; good condition. Complete from 15 to 20 tons capacity per day.

Address

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WRIGHT ENGINE**FOR SALE**

22x42, right hand; flywheel 16 ft. diameter, 30-in. face; in good order; can be seen running any time.

PHILADELPHIA STEEL & FORGE CO.

Works at Tacony, Pa.

New York Office, 50 Church St.

Boiler, Engine and Pump

Having installed electric power, we offer at a sacrifice price one 60 H. P. boiler, one 50 H. P. Atlas engine, one Cameron pump, with all connections, ready to set up and run. All in good shape. Price \$300 for the entire outfit.

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Harrisonburg, Va.

CORLISS ENGINES

1 16x36 Bates.
1 16x42 Allis.
1 16x42 Brown.
1 18x42 Lane & Bodley.
1 20x48 Wetherill.
1 22x48 Hamilton. 1 22x48 Allis.
1 24x42 Atlas. 1 28x54 Hamilton.
Automatic Engines of all sizes.
1 40-ton Corliss Engine Type De La Vergne
Ice Machine.
1 60-ton Corliss Engine Type De La Vergne
Ice Machine.
1 lot Trevanks.
Woodworking Machinery of all kinds.
Belting, Shafting, Pulleys and Hangers.

CLEVELAND BELTING & MACHY. CO.
Cleveland, Ohio.

IN STOCK

Rebuilt and guaranteed for immediate delivery

BOILERS.

1 150 H. P. Manning Vertical Tubular, 125 lbs. steam.
1 66"x18" Horizontal Return Tubular, 125 H. P., 125 lbs. steam.
1 80 H. P. Heine Water-Tube, 125 lbs. steam.
1 75 H. P. Scotch Marine, 125 lbs. steam.
1 50 H. P. Economic, 100 lbs. steam.
SPECIAL—Cheap before removal.
3 60"x20" Horizontal Return Tubular, 125 H. P., 120 lbs. steam, with Wilkinson Stokers. Large stock of return tubular and vertical types, all sizes.

ENGINES.

23"x45" Reynolds. 23"x60" Corliss.
24"x44"x48" Cooper Tandem Compound.
22"x42" Greene. 20"x42" Greene.
16"x36" Bates.
2 14"x32" Watts-Campbell.
14"x20" Russell. 12"x25"x12" Greene.
12"x24" Buckeye.

Large stock of smaller sizes; also automatic and plain slide-valve, vertical and horizontal.

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24"x24"x30" Rand Single Straight Line, 1200 cu. ft.
22"x24"x24" Ingersoll-Sargent Straight Line, Class A, 975 cu. ft.
10"x10"x10" Cox & Sons Duplex, 275-350 cu. ft.
10"x10" Blaisdell Single, 135 cu. ft., belt driven.
Large stock of smaller sizes.

DIRECT-CONNECTED GENERATORS
525 K. W. 250-volt D. C. Westinghouse, direct connected to 19"x44"x48" Greene-Wheelock Engine.

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50 K. W. 125-volt D. C. Westinghouse, 6-pole, direct connected to 10"x13"x10" Westinghouse Compound Engine, 315 R. P. M.

BELTED GENERATORS.

200 K. W. 250-volt Western Electric, 6-pole, belt driven, 500 R. P. M.
Large stock of Dynamos, Motors, all sizes.

HOISTING ENGINES.

85"x12" Webster, Camp & Lane, D. C. S. D.
7"x10" Liddgerwood, D. C. D., 40"x7" boller.
7"x10" Ryan & McDonald, D. C. D.
7"x8" Copeland & Bacon, D. C. S. D., with base fitted for boller.

64"x10" Flory, D. C. D., with 36"x7" boller.
64"x10" Davis, S. C. S. D.
64"x10" Mundy, D. C. D. D.

WESTINGHOUSE ENGINES.

1 13"x22"x13" Westinghouse Compound, 125 H. P.
1 12"x20"x12" Westinghouse Compound, 100 H. P.
1 11"x19"x11" Westinghouse Compound, 80-120 H. P.

2 10"x18"x10" Westinghouse Compound, 65-100 H. P.
Large stock of Junior and Standard types.

FLYWHEEL.

40-ton, 25 ft. diam., 24" bore.
FEED-WATER HEATERS, PUMPS, GAS AND GASOLINE ENGINES, STONE CRUSHERS AND GENERAL EQUIPMENT.

MACHINE TOOLS

PLANERS.
36"x36"x8" Betts. 26"x26"x7" Wheeler.
30"x30"x8" Pease. 20"x20"x4" Sellers.

LATHES.

36"x12" Triple Geared.
26"x14" Fitchburg Lathe.
24"x10" Modern, blocked to 34".
22"x16" Draper. 22"x18" Harrington.
20"x10" 6" Rahn-Carpenter.
20"x10" Rahn-Carpenter Gap Lathe.
20"x10" Bement-Miles. 20"x9" Pond.
20"x12" Lodge & Davis.
18"x12" Rahn-Carpenter.
15"x18" Carroll-Jameison.
15"x18" Carroll-Jameison.
12"x16" Hendey Toolroom Lathes, with collets.
Two 17"x8" Greaves & Klausman.

MILLING MACHINES.

No. 3 Garvin Plain Miller, with dividing heads.
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No. 2 Cincinnati Universal Milling Machine, complete, with vertical attachment, like new.
About 20 Lincoln Type Milling Machines.

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26"x Gould & Eberhardt.
26"x30" Pedrick & Ayer, open side.
20" Steptoe. 16" Steptoe.
20" Smith & Mills. 14" Steptoe.

PRESSES.

Six No. 2 1/2 Philadelphia Power Presses.
Two No. 1 Philadelphia Power Presses.
PG-5 Ferracuts. No. 3 Bliss Geared.
No. 63 Bliss Geared.

DRILLS.

48" Gang Radial. 36" Morris Radial.
42" Hilles & Jones.
38" Gould & Eberhardt Upright Drill, with tape attachment.
20" Plain.

MISCELLANEOUS.

50-lb. Little Giant Trip Hammer.
1 1/2" Wells Bros. Bolt Cutter.
No. 18 Pratt & Whitney Profiler.
45" Gang Radial Drill.
36"x12" Slab Miller.
8" Eaton, Cole & Burham Pipe Machine.
Two No. 5 Springfield Oscillating Surface Grinders.
Two No. 16 Garvin Turret Lathes.
300-lb. Bement-Miles Single Frame Steam Hammer.

FRANK TOOMEY, Inc.

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Brick Machinery for Sale

One Stiff Mud Brick Machine, 20,000 to 30,000 capacity.
One Disintegrator.
One Pug Mill.
One Automatic Cutting Table.
All Steele's make.
Address COLUMBIA BRICK CO.,
P. O. Box 208, Lake City, Florida.

STEEL TANKS

8,000-gallon, 76" x 32".
10,000-gallon, 84" x 36".
Boilers, Engines, Pumps.

ILLINOIS MACHINERY CO.,
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Machinery and Contractors Supplies

Duplex and Jet Pumps, Boilers and Re-
ceivers, Lathes, Cranes, Punches and Shears,
Gears, Steam Belt or Gas Driven Electric
Generators, Searchlights, Buckets, Norden
Safety Hooks.

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A Bargain in Brick Machinery

Having decided to install dry-press machinery, we are offering a most complete outfit of J. C. Steele & Sons No. 3 equipment for making end-cut stiff-mud brick, together with boiler and engine. All is practically new and in first-class running condition, and is a real bargain to anyone who is going into the brick business. For further information address

KENBRIDGE BRICK WORKS,
Kenbridge, Va.

Gas Power and Electrical Equipment**FOR SALE**

A 105-horse-power "Otto" Gas Producer Engine; engine, dynamo, producer, switchboard and electrical equipment, complete. Erected one year ago. No expense was spared to make this a model installation. Particulars and description can be found on page 120 of the March number of "Metal Industry." Can be inspected upon application.

THOMAS A. PAINTER,
79 Eighth Ave., New York.

**FOR SALE
PIPE****Second-Hand**

All sizes, $\frac{1}{8}$ inch to 24 inches

Furnished with new threads and couplings, suitable for all practical purposes; large stock constantly on hand, together with a general assortment of used contractors' machinery.

MARINE METAL & SUPPLY CO.

167 South St., NEW YORK

CORLISS ENGINE**FOR SALE**

30"x48" 275 H. P. Robt. Wetherill & Co.
Corliss Engine; flywheel 28"x16"; complete
and condition A-1.

Bray, Robinson, Curry Woolen Mills, Inc.
Louisville, Ky.

ENGINE BARGAINS

8x12" Erie City Automatic.
9x10" Ames Automatic.
10x10" Watertown C. C. Automatic.
10x14" Id. Automatic.
12x14" Atlas Automatic.
13x18" Erie City L. H. 4-valve.
13x21" Buckeye Automatic.
14 $\frac{1}{2}$ x15" Arlington & Sims C. C.
14x20" Atlas R. H. Automatic.
15x21" Erie City R. H. Automatic.
16x16" Rice R. H. Automatic.
18x30" Vilter Throttling Governor.
14x36" Allis L. H. Corliss.
16x42" Cooper R. H. Corliss.
18x42" Allis R. H. Corliss.

PFANNMUELLER ENGINEERING CO.
3701 S-5-7 So. Ashland Ave., Chicago.

Railroad and Contractors' Equipment and Supplies.**FOR RENT**

for balance of season, two ten-ton Macadam Rollers in good order. Write
PARKER-WORTHINGTON CO.,
Care Manufacturers Record.

CONTRACTORS' EQUIPMENT

30 Hoisting Engines, all sizes.
20 Guy and Stiff-Leg Derricks.
2 1-yard Smith Mixers.
2 9x14" 36" gauge Locomotives.
1 6-ton Byers Geared Locomotive.
1 1 $\frac{1}{2}$ -yard Hayward Orange-peel Bucket.
PITTSBURG MCHRY. & EQUIPMENT CO.,
306 Fulton Bldg., Pittsburgh, Pa.

ENGINES AND CONTRACTORS' EQUIPMENT FOR SALE

Three pairs twin Corliss engines, cylinders 20 by 42. Will sell at sacrifice. Guaranteed in first-class condition and can be delivered immediately. Can be separated if desired.
Also the following—87 Ellison 4-yard dump cars, 36 gauge; 75 tons relay rails, 45 and 60 pounds
1 Mundy 7 by 10 D. C. and D. D. hoisting engine. Cheap to quick buyer. Address

BOSTON IRON & METAL CO., BALTIMORE, MD.

Unusual Bargains in Quarry and Mine Hoists!

18"x30", 14"x18", 14"x16", 13"x32", 2 12 $\frac{1}{4}$ "x
15", 12"x20", 11"x16", 2 10"x12", 10"x10", 2
8"x16", 8"x14", 2 8"x10", 2 7"x10". Send for
list and prices.

THOS. P. CONARD
No. 2 South 15th St., Philadelphia

FOR SALE

Marion "A" 45-ton Steam Shovel, 1 $\frac{1}{4}$ -yard bucket, friction crane. First-class order. Will make attractive price. Can be seen at Millville, N. J. Address

S. B. DOBBS,
304 Bailey Building, PHILADELPHIA, PA.

Logging Equipment**FOR SALE**

18,510 track feet 25-lb. Rail, 137 tons.
20,559 track feet 30-lb. Rail, 174 tons.

Two 25-lb. Switches, complete.
Two 30-lb. Switches, complete.
Two pair 25-lb. Switch Points.

Two 36" gauge Push Cars.

Twelve pair Extra Wheels on Axles.

Twenty-six 36" gauge 30,000-lb capacity Log Cars.

One 25-ton 36" gauge Shay Locomotive.

One 30-ton 36" gauge Climax Locomotive.

One standard-gauge McGiffert Skidding and Loading Machine.

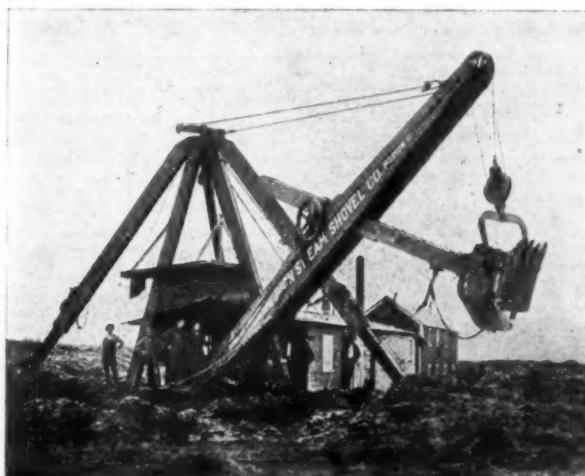
All of above equipment is in good condition and will be traded for lumber, sold for cash, or on easy terms.

TWIN TREE LUMBER CO.,
Maplesville, Ala.

Buying Experience in Dredges

There's a reliable way to select a ditching dredge. Take advantage of the experience of the world's largest builders in this line and get a machine that has stood the test of time, in all kinds of excavating, in nearly every country in the world, and is in actual use by the greatest number of contractors at the present time.

Marion Ditching Dredges embody the practical experience of a quarter of a century. They were first in the field; they are first in the hearts of discriminating dredgers.



**STEAM SHOVELS, DREDGES,
SCRAPER-BUCKET EXCAVATORS**

Write us today for Circular No. 59.

The Marion Steam Shovel Co., Marion, O.

New York, 50 Church Street

Chicago, 1442 Monadnock Block

**CONTRACTORS' EQUIPMENT
FOR SALE**

We offer this list of surplus equipment, subject to prior sale, guaranteed exactly as represented. If you can use any of it, we are sure the price will prove most attractive:

- 1—No. 168 Class B Lidgerwood Crawford Excavator with 60' boom, and 1 $\frac{1}{2}$ cu. yd. Page scraper bucket in good working condition.
- 2—22 and 13x16 Imperial X-2 Belted Air Compressors, as good as new, with 8" unloaders for same complete, Elmsford, N. Y.
- 1—16 H. P. Port Huron Traction Engine, Newburgh, N. Y.
- 1—26 H. P. Huber Traction Engine No. 8277.
- 2—18 H. P. Huber special length Contractors' Traction Engines, Nos. 9020 and 9027, Newburgh, N. Y.
- 1—Freeze Cutting Table, practically new (16 cuts.)
- 1—10-ton Ostler Steam Roller.
- 1—10-ton Aveling-Porter Steam Roller.
- 1—600-gal. Studebaker Sprinkler Wagon.
- 2—450-gal. Studebaker Sprinkler Wagons.
- 2—No. 4 Champion Crushers.
- 1—No. 4 B Gates Crusher, with extra head, shaft eccentrics, etc.
- 1—40 H. P. Nagel Boiler, with engine mounted.
- 1—110 H. P. Boiler, with 75 H. P. Atlas Engine, Ligonier, Pa.
- 1—20 H. P. Porter Donaldson Economic Boiler.
- 1—20 H. P. Erie Economic Boiler, Newburgh, N. Y.
- 1—1 $\frac{1}{2}$ H. P. Gas or Gasoline Fairbanks Engine.
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- 1—Pittsburgh Water Heater, 8" exhaust (suitable for 200 H. P.)
- 4—C No. 3-5 H. P. Gasoline Pumbers, 4 $\frac{1}{2}$ " diameter, brass cylinder, 6-inch stroke, Newburgh, N. Y.
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Only AIR DUMP CAR under absolute control of operator. Can be brought back to upright position, after passing center of gravity, before entire contents of car have been unloaded. This admits of equal distribution of material on both sides of track. Write THE WM. J. OLIVER MFG. CO., KNOXVILLE, TENN., AND 50 CHURCH ST., NEW YORK, N. Y.

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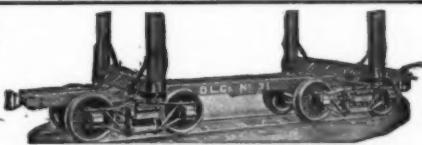
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R. D. NEELY, Secretary

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CARS AND TRUCKS

OF ALL KINDS, FOR ALL PURPOSES



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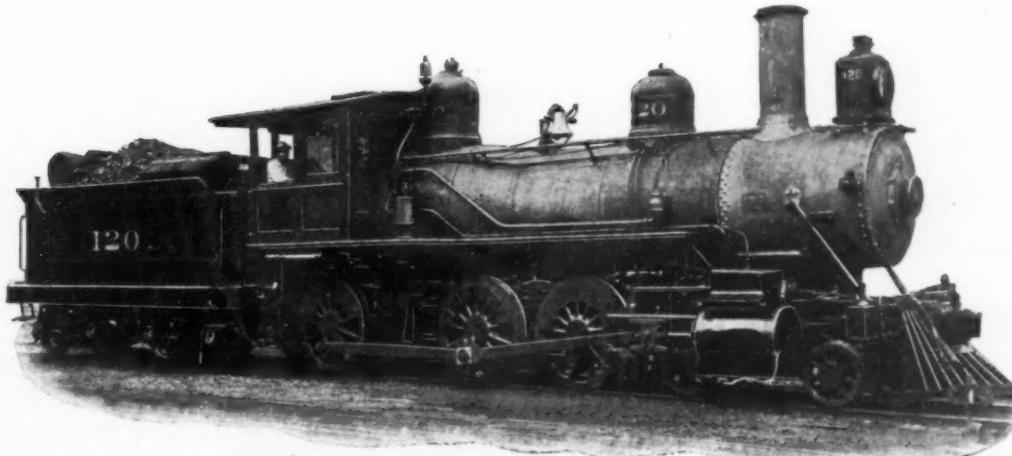
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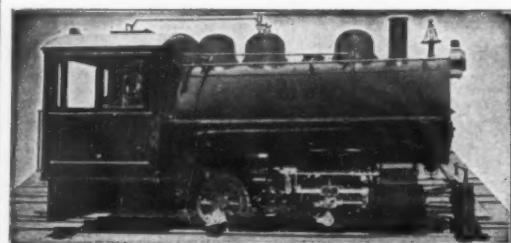
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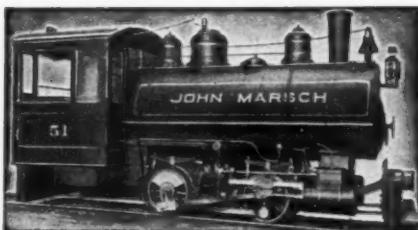
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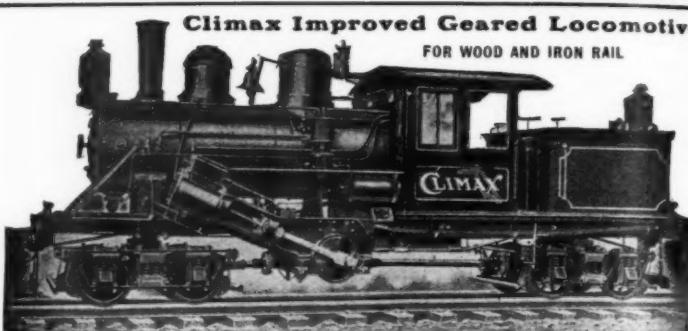
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BUILT FOR SPECIFIED SERVICE



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all sizes
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The Robins Belt Conveyor was the original and is today the standard of this type of conveying machinery.

It is successfully and economically conveying ore, rock, coal and similar materials under the most trying conditions of service.

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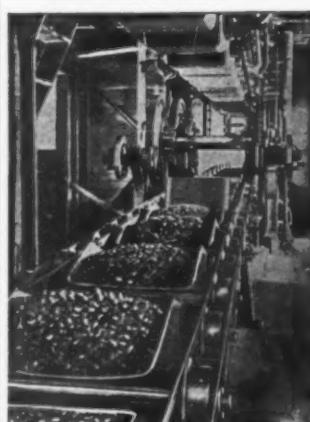
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Bucket Conveyor



The Lower Run of a Hunt Standard Conveyor Showing How Evenly the Buckets are Filled. The Bucket Standing Vertically is Dumping the Coal.

Combines the following:
rapidity of handling.
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Cost for maintenance is less than that of any other Conveyor.
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For the electrically equipped coal mine there is the "Electric-Air Radialaxe," adapted for shearing, entry driving, cutting out bands, mining in mid-stream, or undercutting on a pitch—all done by electric power at the least cost in the shortest time.

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And of course it has the wearing qualities—the staying power—which distinguish all Ingersoll-Rand products.

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AIR COMPRESSORS IN ALL SIZES
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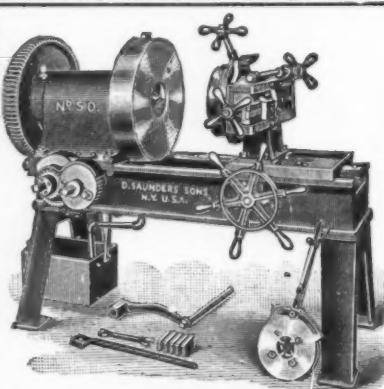
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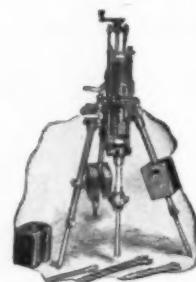
All Sizes for Pipe Mills
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This cut shows our No. 5 D Improved Power and Hand Pipe Threading and Cutting Machine. Capacity 1 to 6 inches. Gripping chuck can be Universal or Independent. Let us send literature which tells all about it.

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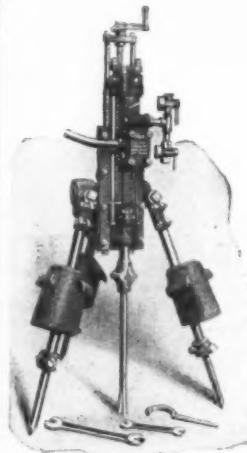
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If you are interested in a rock drill that will strike a harder and quicker blow and use less power than any other piston drill manufactured, send for our Wizard bulletin.

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Sheet Pile Hammers, Hammer Drills, Core Drills,
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MURPHY LITTLE CHAMPION
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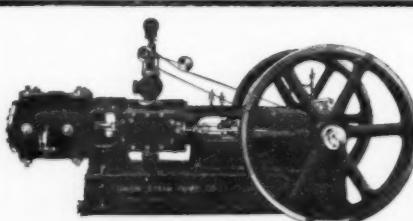
Duntley TRADE MARK PORTABLE ELECTRIC TOOLS Built for Heavy Duty

Will operate at rated capacity without heating.

Application of Electric Tools to difficult work is one of our specialties.

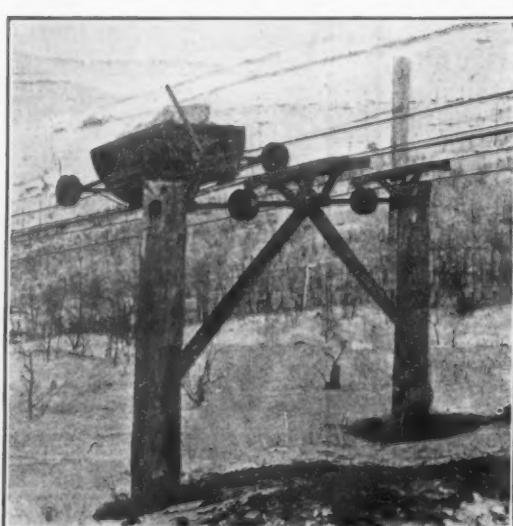
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CHICAGO PNEUMATIC TOOL COMPANY
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A Strictly High-Grade Line of
AIR COMPRESSORS,
CONDENSERS AND
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OWNERS AND BUILDERS OF

LAWSON'S AERIAL and MOTOR TRAMWAYS

The cheapest and most efficient methods known for the transportation of Coal, Ore, Sand, Lumber, Cross-ties, Cordwood, Tanbark, etc.

We will provide our own transportation facilities and contract to move any kind or quantity of tonnage, over any character of country, and for any distance ranging from a few hundred feet to eight or ten miles at a stipulated price—giving to our customers, if they so desire, the option to purchase the tramways and equipment, after same have been installed and put in operation, on easy payments.

If you have any kind of transportation problem, please write us, stating fully just what your requirements are, and we will guarantee to save you money.

Consolidated Tramway Co., Roanoke, Va.

Note: We are always in the market for good mineral and timber properties.

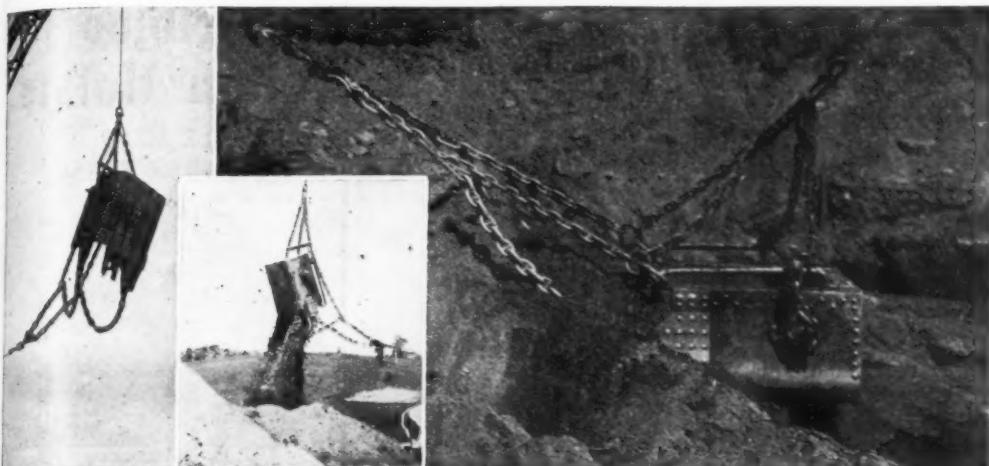


Illustration D935.

Illustration D991

Illustration C258

Illustration C258 shows what a clean cut this bucket makes in digging. It is here working in top-soil. The bucket dumps its load completely. Illustration D991 shows this feature well and also gives an idea of the perfect design of the bowl.

A New Hayward Bucket of the Drag Scraper Type

The Hayward Company announces that it has now put on the market a new and perfected Drag Scraper Bucket. It has been thoroughly tested in actual work and stringently tried out in many kinds of material. And the results far surpassed **anything** ever accomplished by buckets of this type.

Read this letter concerning its work; the name of the engineer will be furnished upon request:

"I can state that your Hayward Drag Scraper Bucket is the best one yet that I have on the works. * *It will dig hard-pan and shale rock as well as dirt.* I believe that your improved bucket * *is the best on the market.*"

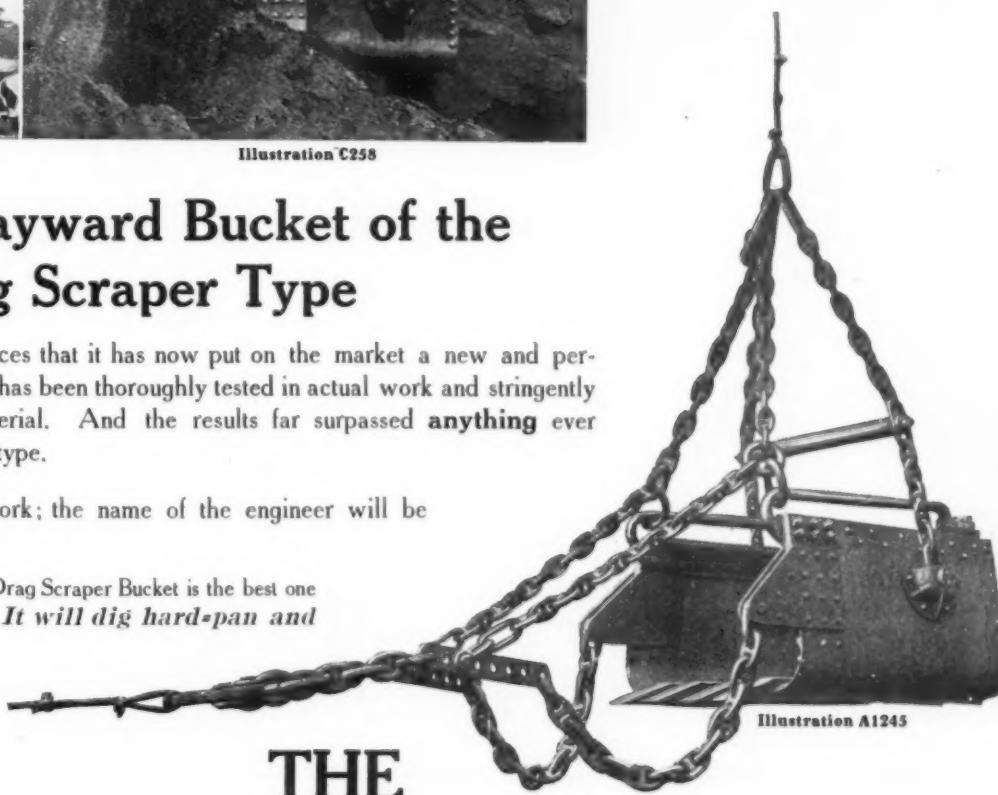


Illustration A1245

THE HAYWARD DRAG SCRAPER BUCKET

will dig anything from light loam to "rotten rock," and can be operated by locomotive cranes, excavators and other types of digging and rehandling machines.

It will dig at any angle. So perfect is its mechanism that **within three minutes** it can be changed from a **hard to a soft digging bucket.**

It has **replaceable** pulling lugs—no other make has—and they result in a striking economy. There is not a rigid bale in it, as in other makes, so there is nothing to break when it lands heavily. It has an open front, no cross-bracing to **prevent** it from entering the material, and its strain on the operating machine is far less than with any other bucket.

These are only a **few** points that make it absolutely without a peer. As an example of its incomparable efficiency, look at Illustration D 993, where one of these buckets is shown working in "rotten rock," an exceedingly difficult material to dig. The slope on the right of the picture was made by another make, **which could not dig without blasting.** With the very same operating machine, in the very same material, this Hayward Drag Scraper Bucket **filled at every trip.** Notice the cut it makes.

Let us submit **proof** of its unequalled efficiency. We will gladly send full description, prices and specifications upon request. Ask for illustrated Pamphlet M. R. 576.

THE HAYWARD COMPANY
50 CHURCH STREET,

Illustration D993



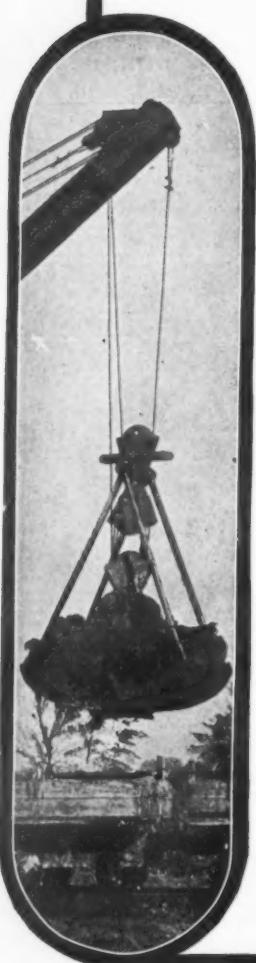
Illustration C254 shows plainly how the Hayward Drag Scraper Bucket stays in the correct position, no matter how full the load. At every step the operator has absolute control of Bucket.



* We are responsible for the italics—full details of the work mentioned with photographs will be furnished on request.

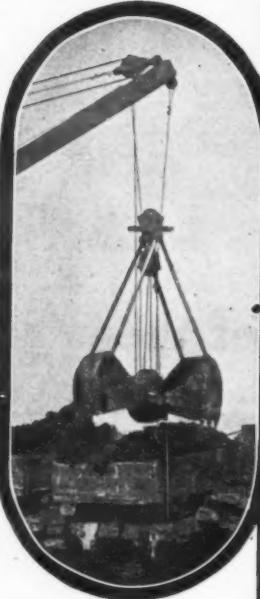
Illustration C254

A Bucket That Really Digs The Owen Bucket



has 100 per cent. greater digging power than any other bucket on the market today. The digging power is applied equally to both jaws.

Substantially constructed throughout and fully guaranteed. Try one on your work.



Successfully handles gravel and sand, crushed stone, clay and coal

Write for New Catalog

The Owen Bucket Company
530 Rockefeller Bldg., CLEVELAND, OHIO

**MEAD-MORRISON
MANUFACTURING COMPANY**



THE Mead - Morrison Orange Peel Grab combines a minimum of working parts with maximum durability, efficiency and capacity. The period of its service is prolonged indefinitely through the use of renewable bronze bushings and renewable steel digging points. Its use is a permanent economy.

Mead-Morrison Grabs are also made in Clam Shell and Special Types. Correspondence invited.

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Tribloc Chain Hoists

ALL SIZES
1-4 TO 40 TONS



Guaranteed for five years
Costs less—the Peer of all

Manufactured by
Ford Chain Block & Mfg. Co.
PHILADELPHIA, PA.

Manufacturers Record, the Medium for Machinery Advertisements.

The Most Powerful Buckets for their Work Ever Made

Digging rock, heavy boulders and other such hard and odd-shaped material is a problem that tests a bucket more than any other work.

HAYWARD THREE-BLADED ORANGE PEEL BUCKETS

are recognized to be more powerful and useful in this class of work than all other buckets.

They have fewer wearing parts than any other buckets and therefore their cost of upkeep is lower. In handling rock, the three blades do not easily get out of line.

The latest type of these buckets has a new power wheel guard, which prevents the rope from leaving the power wheel, no matter how much slack line is payed out.



Illustration No. A1194

These buckets are GUARANTEED to be perfect, as all Hayward Buckets are.

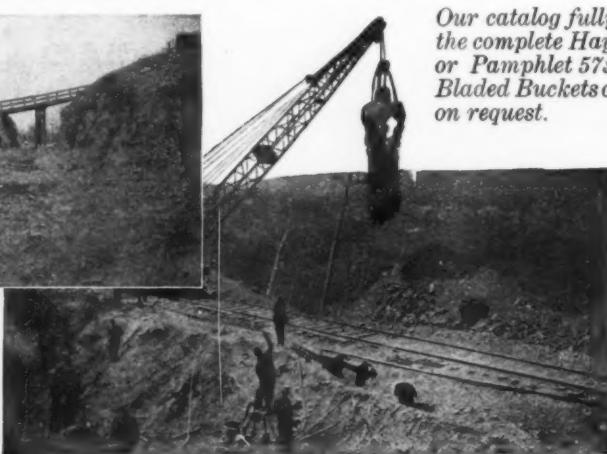


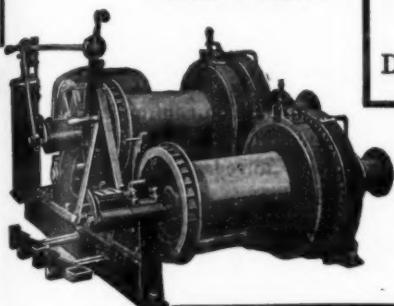
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Our catalog fully describing the complete Hayward Line, or Pamphlet 573 on Three-Bladed Buckets only, mailed on request.



Illustration No. A1215

**The Hayward
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50 Church Street
New York**

THE WILLIAMSONSTEAM
AND
ELECTRICTHE HOIST WITH THE
PERFECT
DRUM MECHANISMWILLIAMSON
BROS. CO.
Philadelphia, Pa.

15-508

DAKE**SPECIAL REVERSING ENGINE**

For direct attachment. Used with compressed air or steam. Write for catalog and prices.

Also manufacture stationary engines, pneumatic chain hoists, contractors' hoists, derrick crabs and swinging gears.

DAKE ENGINE CO.

GRAND HAVEN, MICH.

New York Representative, 50 Church Street

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**LIDGERWOOD**
LOGGING ENGINESDiffer in Important Particulars from
Hoisting Engines

We Build Both Kinds SEND FOR CATALOGUES

LIDGERWOOD MFG. CO.

96 Liberty St., N. Y.

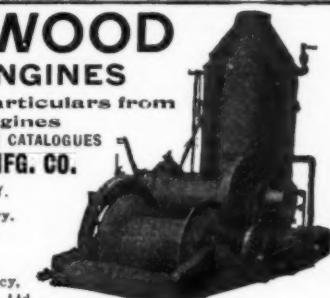
Logging Machinery.

Branch Office,

Seattle, Wash.

New Orleans Agency,
Woodward, Wight & Co., Ltd.

London, England.



Patent Logging Engine.

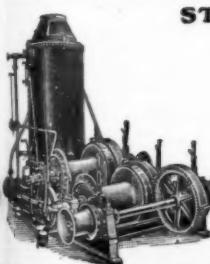
C-D Type Long Haul Engine.

National Hoisting Engine Co.

HARRISON, N. J.

**Steam and Electric Hoisting Engines**Contractor's Derricks
CablewaysPile Driver Equipment
FOR ALL PURPOSES**FLORY HOISTING ENGINES**

STEAM AND ELECTRIC

For Contractors, Bridge Building,
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Hoisting Duty

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BANGOR, PA.**HOISTING ENGINES**BUILT FOR
All Kinds of Hoisting and Haulage Work

MAIN OFFICE AND WORKS:

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Near Brown
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80 "AMERICAN" DERRICKS
1 "AMERICAN" LOCOMOTIVE CRANE**Used In the Construction of this
Great ProjectAll about Hoisting Machinery in our Catalog. May we send
you a copy?**American Hoist & Derrick Co.,**

St. Paul, U. S. A.

American
Hoist &
Derrick Co., St.
Paul, Minn.:
Please send infor-
mation and prices on
American Derricks and
Engines.Name.....
Address.....
M**Clyde**
Hoisting Engines
AND DerricksARE BUILT FOR
SEVERE DUTY and BEST RESULTS

IN

GENERAL
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PILE DRIVING
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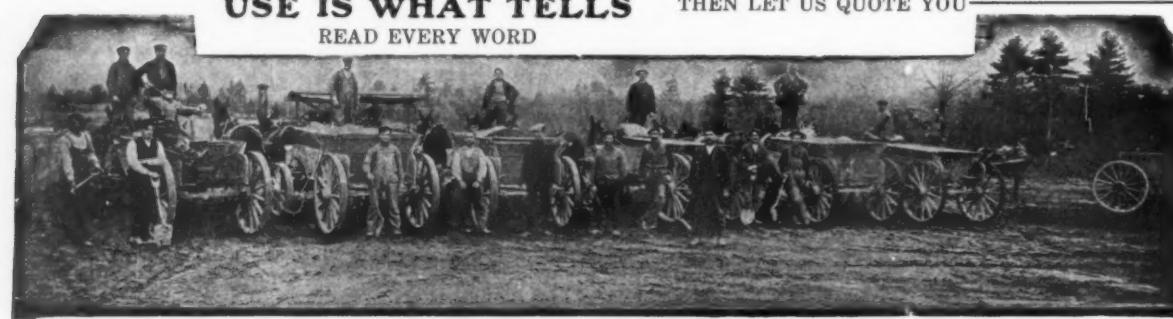


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Wherever materials are being handled under extraordinary conditions, you will most generally find a BROWNING LOCOMOTIVE CRANE successfully doing the work.

If you have a material handling or transfer proposition confronting you, write for our new 1912 catalogue; it will give you an idea of some of the difficult problems we have already solved.

The Browning Engineering Co., Cleveland, O.



USE IS WHAT TELLS
READ EVERY WORD

THEN LET US QUOTE YOU

"80 EAGLES"

Brown Station, N. Y.,
Feb. 18, 1909.
Eagle Wagon Works,
Auburn, N. Y.:

Dear Sirs—We enclose here-with order for 20 two-yard Eagle Dump Wagons, similar to the 60 we have already bought from you. Yours truly,
MACARTHUR BROS. CO.
AND WINSTON CO.

Eagle Wagon Works
Auburn, N. Y.

The Contractors' Plant Mfg. Co.

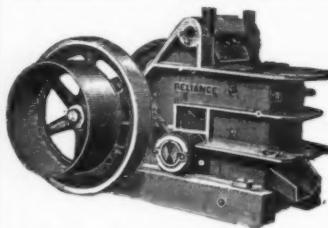
131 Erie Street
BUFFALO, N. Y.

Electric, Steam, Horse
and Hand-Power
HOISTING MACHINERY



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Reliance Crushers



Frame is a solid steel casting thoroughly annealed.
UNIVERSAL ROAD MACHINERY CO.
KINGSTON, N. Y.

BOSTON ROCHESTER NEW YORK

WE MANUFACTURE
HOISTING ENGINES

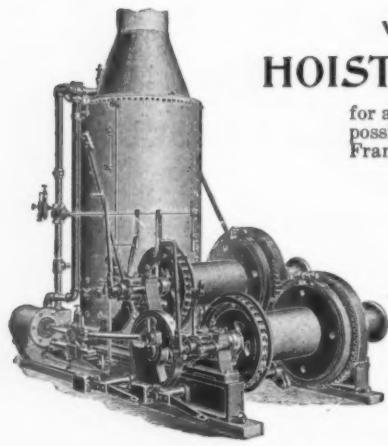
for all purposes and sell them at the lowest possible price. All engines built on Steel Frames and with Steel Drum Barrels. Also

Derrick Cars, Derrick Irons, Hand Powers, Blocks and Sheaves

We make a specialty of

Double and Single Platform Elevators
for handling brick and mortar.
These elevators are adapted
for any height building. Write
for Catalogue.

THE JOHN F. BYERS MACHINE CO.
RAVENNA, OHIO



**The Ruggles-Coles
PORTABLE HEATING PLANT**

For Modern Bituminous Pavements

Capacity—1200 to 1500 square yards of 2-inch surface per day

Town and city officials, paving companies, road contractors, engineers and all others interested in building and maintaining the best and most economical streets and roadways will profit by knowing the actual work of this machinery, and we will be glad to furnish all the necessary information.

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INDESTRUCTIBLE SIGNS

For all road, and street and outdoor advertising purposes. The letters are cut into wood or any of the metals by a new automatic lettering machine, that reduces the cost one-half. The finish is in cement and looks like the enameled sign, but will last forever. Any size from 3½x24" to 12"x48". In steel, iron, brass, copper or wood. Patterns for cast brass or iron signs made by the same machine at the same low cost. Send for illustrated circular and price list.

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STANDARD Road Oil

Specially Prepared for
Road Construction and Road Maintenance

Asphalt Road Oil

In four grades, containing from 30% to 60% asphaltum. For use on well-made roads as they are. One application usually lasts a season.

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A lighter asphaltic oil, prepared to mix readily with water. Particularly serviceable as a dust preventive for parks, private estates, boulevards, etc. Requires frequent application where traffic is heavy.

Macadam Asphalt Binder

Almost solid asphaltum, used in constructing macadam and all other roads where asphaltic material is needed.

New Illustrated Book Free

We will mail you free, upon request, our new Standard Road Oil Book, 48 pages, profusely illustrated. It explains the particular uses for which the different oils are prepared, and how they should be applied to give the best results.

The information this book contains will be found invaluable to Supervisors, Road Commissioners, State and Municipal authorities, and to owners of private estates.



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American Ingot Iron CULVERTS

Are Efficient



Culverts of AMERICAN INGOT IRON are today extensively employed by the Government, the various State Highway Departments, and the leading Railways of the country—convincing evidence of their superiority in their class.

These facts notwithstanding, they are low enough in price to be used wherever economy is a factor to be considered.

We shall be pleased to furnish information applicable to your requirements.

**North Carolina
Metal Culvert Co.
GREENSBORO, N. C.**

American Ingot Iron Road Culverts, Tanks, Roofing and Siding.



Look for the trade mark. It means durability. Don't accept the imitations. We have the proof that our culverts will carry the heaviest loads that travel and will last for years where others fail. Write for Pamphlet A. on AMERICAN INGOT IRON and B. on culverts and tanks.

The Tennessee Metal Culvert Co., Nashville, Tennessee.

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Manufacturers of

Sewer and R. R. Culvert Pipe

Fire Brick, Milled Clay Flue Pipe and Chimney Tops, Urns, &c.

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COPELAND-INGLIS SHALE BRICK CO., MFRS.
Office—610 First Nat. Bank Bldg. Birmingham, Ala.

HIGH GRADE PAVING BRICK

Guaranteed to stand 18% standard test

THE CARLYLE PAVING BRICK CO.

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BALFOUR Dressed Granite Blocks

MODERN

ENDORSED BY EXPERTS

Develop phenomenal strength and resistance to wear in official government tests.

Ask for booklet "GRANITE" and The Balfour Specification
THE HARRIS GRANITE QUARRIES CO., - Salisbury, N. C.
Standard Blocks—Flange Blocks



1. Culverts...corrugated, anti-corrosive.
2. 16 ga. or 9/128" thick, nested, bolted.
3. Knocked down; to be 18" long, one-fourth of car to be 30" and three-fourths 24"
4. "Acme NoCoRo" culverts of Canton Culvert Co.'s make

"Acme" (Nestable) No-Co-Ro Metal Corrugated Culverts

—Are the World's
Standard Corrugated Culvert

ONE BRANCH OF THE U. S. GOVERNMENT SPECI-
FIES AS SHOWN ABOVE. OTHER FOREIGN GOV-
ERNMENTS SPECIFY LIKEWISE. SEND FOR OUR
LITERATURE AND DELIVERED PRICES.

THE CANTON CULVERT CO.

MANUFACTURERS

CANTON

OHIO



AMERICAN INGOT IRON CORRUGATED CULVERT PIPE

INSURES

FIRST COST—LOW
INSTALLATION COST—VERY LOW
UPKEEP COST—NONE
DUTY DONE—PERFECT

The 36" culvert shown is in service near Columbia, S. C. Has but 4" of earth covering. The full circle construction, solidly and strongly riveted in continuous length, in conjunction with American Ingot Iron, the purest iron manufactured commercially, is all that makes for permanency and economy.

This iron is universally indorsed as the best rust-resisting iron in existence, a quality most essential in culvert service.

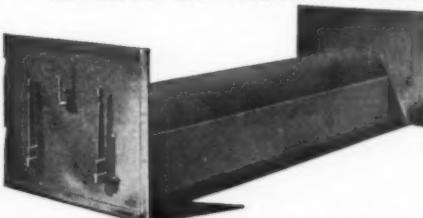
We court the personal investigation of the most discriminating road builder, steam and electric engineer, and others.

Write for particulars, etc., to

THE DIXIE CULVERT & METAL CO.
ATLANTA, GA. LITTLE ROCK, ARK.

**SAVE 25 PER CENT
IN COST OF CONSTRUCTION** CULVERTS
CONDUITS
SEWERS

Our Collapsible
Steel Forms
Will do it



They are the lightest,
strongest, easiest handled
forms on the market. Not
a single failure anywhere.
Write for illustrated book-
let and full particulars.

CONCRETE FORM & ENGINE CO., 87 Congress St. W., DETROIT, Mich.

These Corrugated Metal Culverts



STAND THE
STRAIN

The heaviest loads do
not affect them.
Carefully made and
thoroughly tested before
shipped.

Made of "American Ingot" Iron, they cannot rust. They make a permanent installation. They cost less than wood and are safer than their imitators. Used by the biggest railroads and the best road engineers. Write for "Book of Tests."

KENTUCKY CULVERT MFG. CO.

BUECHEL, KY.



Barrett's PAVING PITCH



Main Street, Near Thornton Street, Akron, Ohio, Filled With Barrett's Paving Pitch in 1891.

PAVING PITCH IN AKRON

The best evidence in favor of pitch as a filler for brick pavements comes from the towns that have had the longest experience with it. Akron, Ohio, for example, has over 65 miles of paved streets; over 52 miles of these are brick, 90 per cent of which are filled with Pitch Filler.

The first brick pavements laid in Akron were put down in 1890 with Pitch Filler. After twenty years, they are in good condition today and not a cent has been spent for repairs. The Pitch Filler has proven satisfactory on every kind of foundation—crushed slag, crushed stone, gravel or cement concrete. The Pitch has been used on streets of 1 per cent to 9 per cent grades; it has kept the foundations dry and firm and has been in every way satisfactory.

During the year 1910 two million pounds of

Paving Pitch were used in this city, and the 1911 plans call for a large additional quantity.

Akron's experience with fillers has not been confined to pitch alone, so that the very large excess of pitch filler used over all other kinds has not been because of ignorance or lack of experience with other fillers.

Pitch Filler is also used in Akron by private concerns, particularly the Street Railway Company, because it can be used in hot or cold weather without delaying traffic or blocking the street.

Pitch Filler is the right filler for brick. History has proven it everywhere. The best Pitch Filler is Barrett's Paving Pitch.

Booklets on request.

BARRETT MANUFACTURING COMPANY

New York	Chicago	Philadelphia	Boston	Minneapolis	St. Louis	Cleveland
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What a St. Louis Man Says:

AUGUST 28, 1911.

GENTLEMEN :

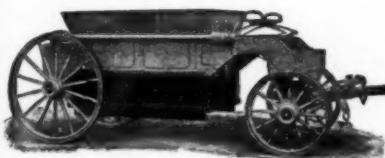
Regarding the *TROY* Dump Wagons that we recently purchased from your company, beg to state they are the *best wagons we have ever used*, and we have used a great many different kinds.

We are handling 70 cu. ft. of binder or top in each load—heretofore 50 cu. ft. was the limit. Owing to the fact that we are hauling eighteen boxes of asphalt in two loads instead of three, as on the old wagons, we are *saving one-third* of the former cost, and figure this amounts to about \$10.00 per day.

We cannot recommend *TROY* Wagons too highly to anyone wanting a light-running, durable wagon that will stay on the job day after day.

Yours very truly,

G. A. HEMAN, 501 Holland Bldg.



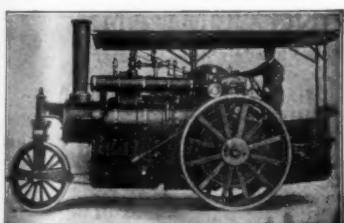
These *TROYS* were 3-yd. asphalt wagons. No comments are necessary after Mr. Heman's letter. Get Catalog 2M.

The Troy Wagon Works Co.

106 E. Race Street

TROY, OHIO

THE KELLY-SPRINGFIELD
ROAD ROLLER CO.
SPRINGFIELD OHIO



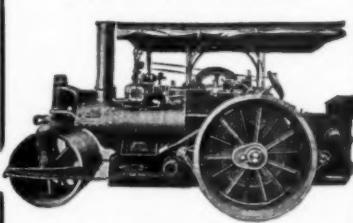
ROAD ROLLERS

ALL TYPES
ALL SIZES

SEND FOR CATALOGUE

Buffalo Pitts Rollers

BUILT FOR SERVICE



Made in all types and sizes
BUFFALO STEAM ROLLER CO.
BUFFALO, N. Y.



Empire Steel Wheels

Plain or Grooved Tire

We make wheels of all kinds and for any purpose. Any size or capacity, to fit any axle.

Also Hickory or Steel Axles, Skeins, etc.

A complete line of Trucks for Farm and Logging, Gasoline Engine Mountings, Concrete Mixers, Plantation, etc.



Empire Manufacturing Co., Quincy, Ill.

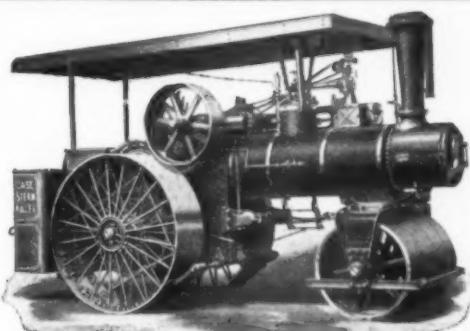
P. O. BOX 700

ARE YOU A JUDGE

OF

ROAD MACHINERY?

EXAMINE THE CASE ROAD ROLLER



\$2,200—6 Per Cent. Discount for Cash.

CASE ROAD ROLLERS

Are built right by a firm with 70 years successful manufacturing experience, and

GUARANTEED

Greater water and fuel capacity,
Easier and cheaper to operate,
And its strength and durability,
All go to make the

CASE ROLLER

The up to date roller for good roads.
We will gladly have our representative call
And go fully into details.
There are 9,000 Case Agents and 65 branches
At your service.

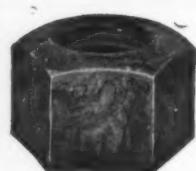
Write for Catalog L.

J. I. CASE THRESHING MACHINE CO.

INCORPORATED

RACINE, WIS., U. S. A.

Send for Our Contractors' General Purpose Engine and Municipal Tractor Catalog L.

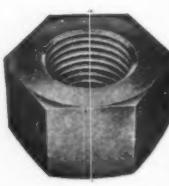


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FOR EVERY PURPOSE

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Company

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Steel Castings

Weighing from 1 lb. to 300 lbs. each

Suitable for Dogs, Clamps, Wheels, Pinions and other castings where strength is required.
Used almost exclusively for Automobile Work.
Quick deliveries.
Your Inquiries solicited.

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CRUCIBLE STEEL CASTINGS

From 1 to 2000 lbs.

Special Die Steel.

Vanadium Steel and Monel Metal.
Steel made in the Crucible
Especially adapted to Castings subject to extensive machine work.

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CASTINGS

Brass and Iron.

All Kinds. Any Quantity.

Let us hear from you.

We also estimate on structural steel, ornamental iron and new machinery.

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ROANOKE, VA.

Engineers Founders Machinists

Gilbert "C" Metal

—it pours at a relatively low temperature and pours freely.

—its bearing surface is hard and glassy; takes a perfect film of lubricant.

—too tough to break under bearing impact or to roll up under bearing pressure.

—try a case on our guarantee.

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Sheets, Plates, Rivets, Bars, Nails, Conductor Pipe, Eaves, Trough, Elbows, Shoes, Ferrules.

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Grey and Malleable Iron Castings

From one ounce to fifty thousand pounds

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RICHMOND MACHINE WORKS, Inc.

Successors to MAYO IRON WORKS, Inc.
2404 E. Main Street, RICHMOND, VA.

RELIANCE STEEL CASTING CO.
Manufacturers of
HIGH GRADE STEEL CASTINGS

Up to 20 Tons in Weight

28th and Smallman Streets

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J. C. H. GALVANIZING COMPANY

1110-14 N. Front Street, Philadelphia

Galvanized Rounds, Half Rounds, Half Ovals and Chain
In Stock and for Immediate Shipment

Special Attention to Jobbing Work. Large Work a Specialty. Inquiries Solicited

Russell, Burdsall & Ward Bolt & Nut Co.

BOLTS, NUTS,
RIVETS, WASHERS, Etc.



SPECIAL BOLTS AND NUTS TO ORDER

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PORT CHESTER, NEW YORK
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MAIN OFFICE
AT

PORT CHESTER, NEW YORK



A wire nail is the same thickness from the point to the head.

It holds no tighter near the head than near the point. This is because of its uniform cylindrical shape.

La Belle Cut Nails

are wedge shaped and rough. They cut their way into the wood fiber and hold tighter with every blow of the hammer.

They produce absolute rigidity. They resist every jar and strain.

Time and experience have proved them to be the most economical nail on the market.

Write for "Romance of the Cut Nail Industry," care Dept. R, and get one of the first copies off the press.

La Belle Iron Works

General Offices: Steubenville, O.

Works:
Steubenville, O.

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We are SPRING SPECIALISTS. You should know us.

SPRINGS OF
Flat,
Round
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Square
Wire

All Shapes and Styles
High Grade Machinery Springs

SPRINGS OF
Steel
Brass
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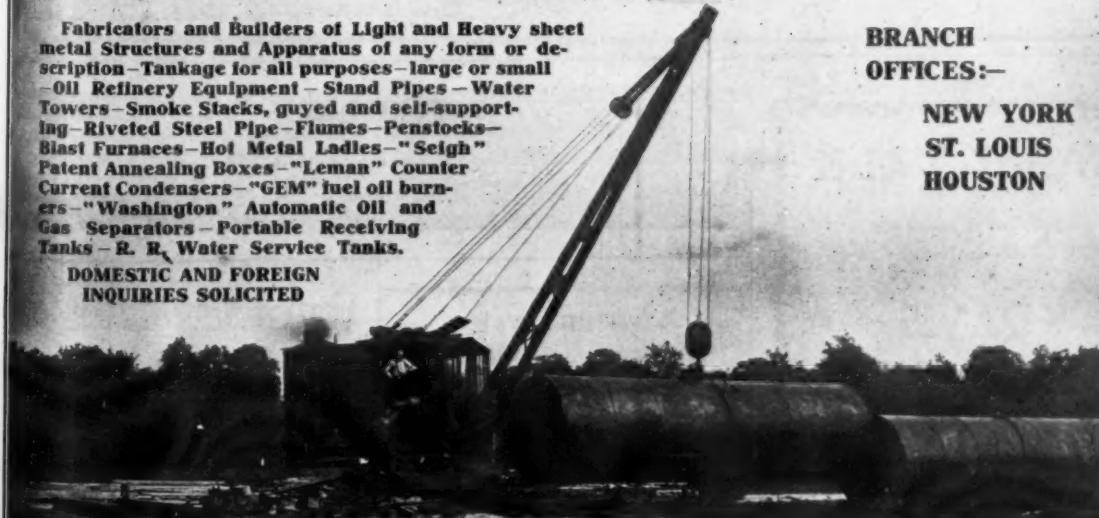


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THE PETROLEUM IRON WORKS COMPANY SHARON, PA.

Fabricators and Builders of Light and Heavy sheet metal Structures and Apparatus of any form or description—Tankage for all purposes—large or small—Oil Refinery Equipment—Stand Pipes—Water Towers—Smoke Stacks, guyed and self-supporting—Riveted Steel Pipe—Flumes—Penstocks—Blast Furnaces—Hot Metal Ladles—“Seigh” Patent Annealing Boxes—“Leman” Counter Current Condensers—“GEM” fuel oil burners—“Washington” Automatic Oil and Gas Separators—Portable Receiving Tanks—R. R. Water Service Tanks.

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Loading large shipment of 10' x 30' Single, Double and Triple Compartment Cylindrical Horizontal Oil Storage Tanks for Distributing Stations. These tanks may be supported on brick or concrete piers or by STRUCTURAL STEEL SUPPORTS as desired.

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EXPERT IN DROP FORGING

If you want your intricate, peculiar drop forgings made right, come to us. We've taken pains to become expert, and we believe our work will please. Forgings made of iron, open hearth carbon steel, chrome and nickel steel, copper, etc. We make any kind.

RICHMOND FORGINGS CORP., (Acca),

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Malleable Iron Castings of Highest Quality

Annual Capacity 25,000 Tons.

Castings of all descriptions furnished.

Send Blueprints or Samples for Estimates.

MISSOURI MALLEABLE IRON CO.
EAST ST. LOUIS, ILL.

DROP FORGINGS

LARGE AND SMALL

Machine Work and Spur and Bevel Gears

Let us know your needs. Prices right.

GREAT SOUTHERN AUTOMOBILE COMPANY
BIRMINGHAM, ALA.

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WE MAKE A SPECIALTY
OF SCALES FOR
RAILROADS
OIL MILLS
AND FERTILIZER WORKS

Our Catalogue contains every improvement known to modern science in the manufacture of heavy weighing machines.

HOWE SCALE CO.

341 Broadway, N. Y.

NEW PLANT UP-TO-DATE NEW MACHINERY
Rome Scale & Manufacturing Co.

ROME, GA.

MANUFACTURERS OF
SCALES AND TRUCKS
OF ALL KINDS.



“THE STANDARD” SCALES

Are Made Right, Weigh Right, and Are Sold at a Price that Is Right. Will weigh from $\frac{1}{4}$ ounce to 200 tons. If you need Good Scales write us for prices.

The Standard Scale and Supply Co. 243-245 Water Street, Pittsburgh, Pa.

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Corrugated Galvanized Steel
FOR FUEL OIL, PETROLEUM OIL WELLS,
FACTORIES, ETC.
Also CISTERNS for under or over ground use
Our Work Guaranteed. Write

HARRY BROS. CO., 235 Alamo Street, Dallas, Tex.
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of all kinds, plain and lithographed, for fruits, vegetables, syrup, coffee, lard and all other purposes.

THE UNITED STATES CAN CO.
Harper and Linden Sts. CINCINNATI, OHIO

A. K. ROBINS & CO. Canning Machinery

CANS, CASES, LABELS

115 Market Space, BALTIMORE, MD.

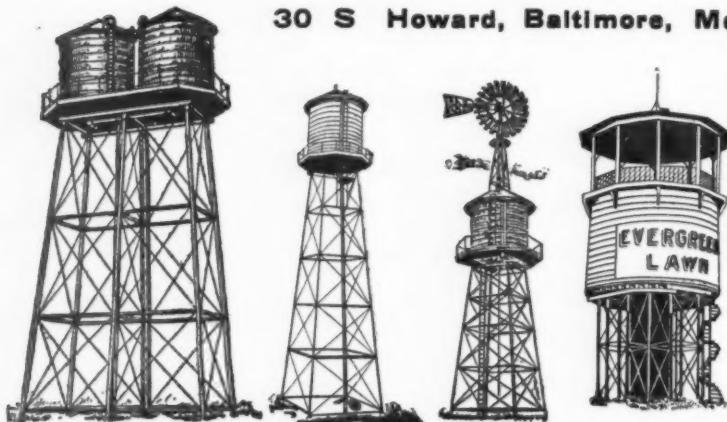
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SOUTHERN CAN CO.

BALTIMORE, MD.

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TANKS AND TOWERS
AND
Domestic Water Works Plants
THE BALTIMORE COOPERAGE Co.**

30 S Howard, Baltimore, Md.



THE TANKS WITH A PEDIGREE. IN USE THE WORLD OVER

**ELEVATED STEEL
TANK TOWERS**

Mechanically Correct in Design and Workmanship
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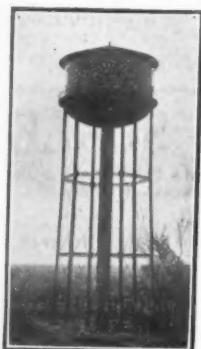
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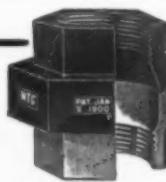
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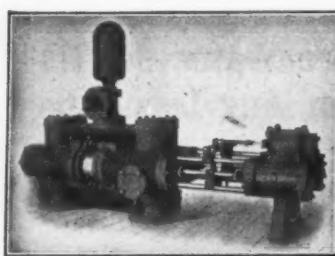


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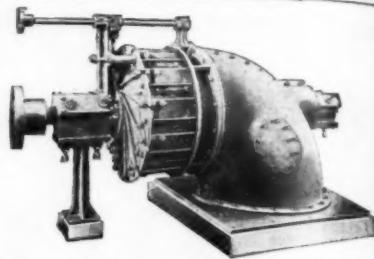
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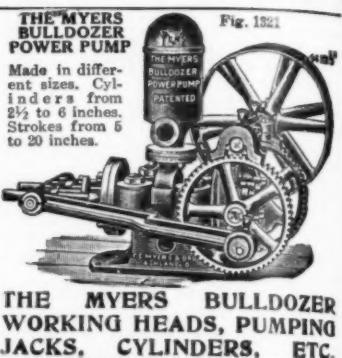
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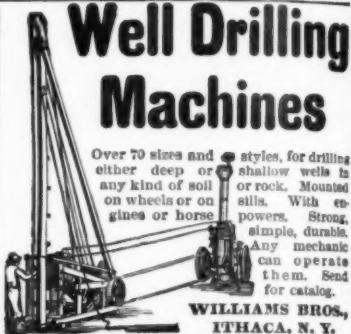
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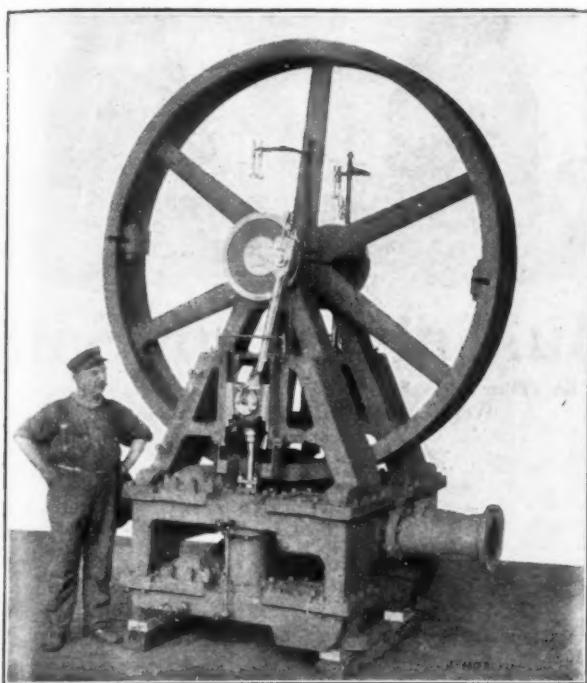
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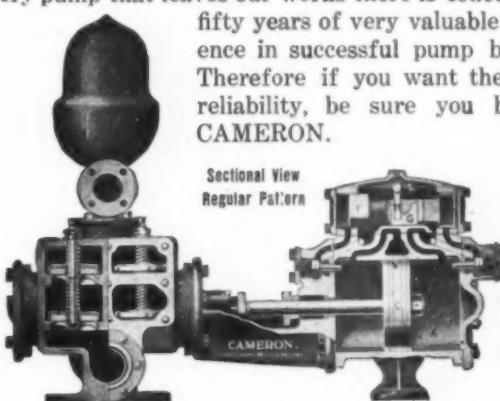
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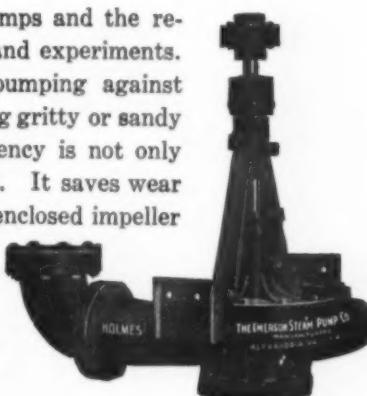
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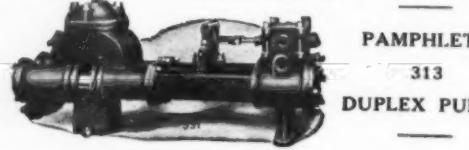


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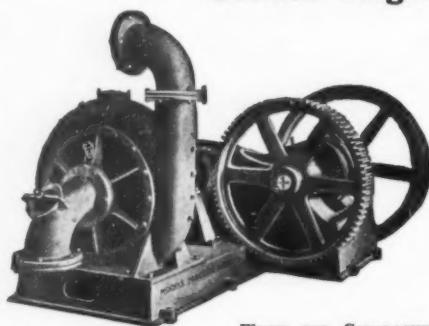
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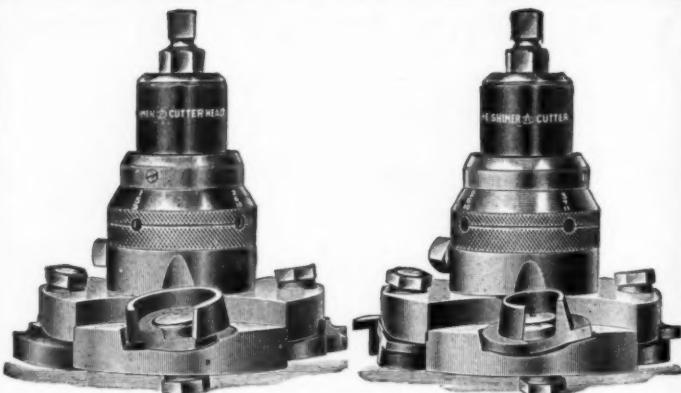
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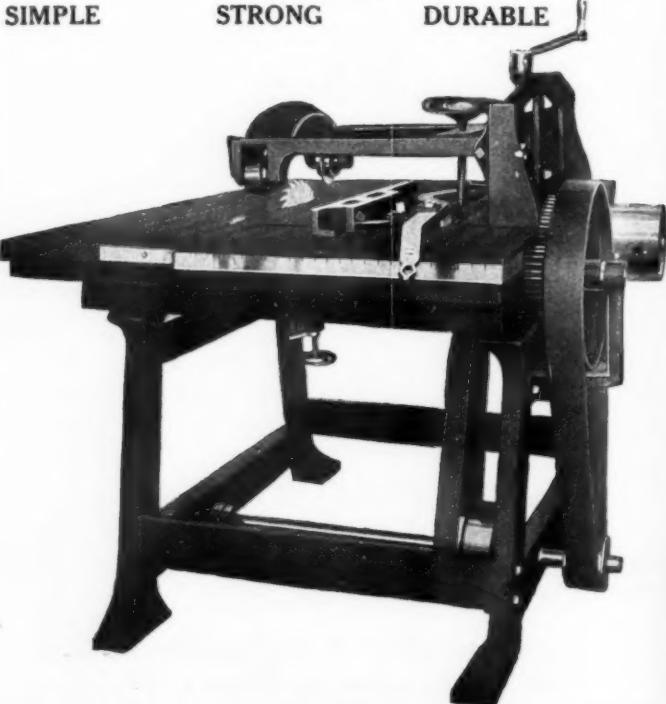
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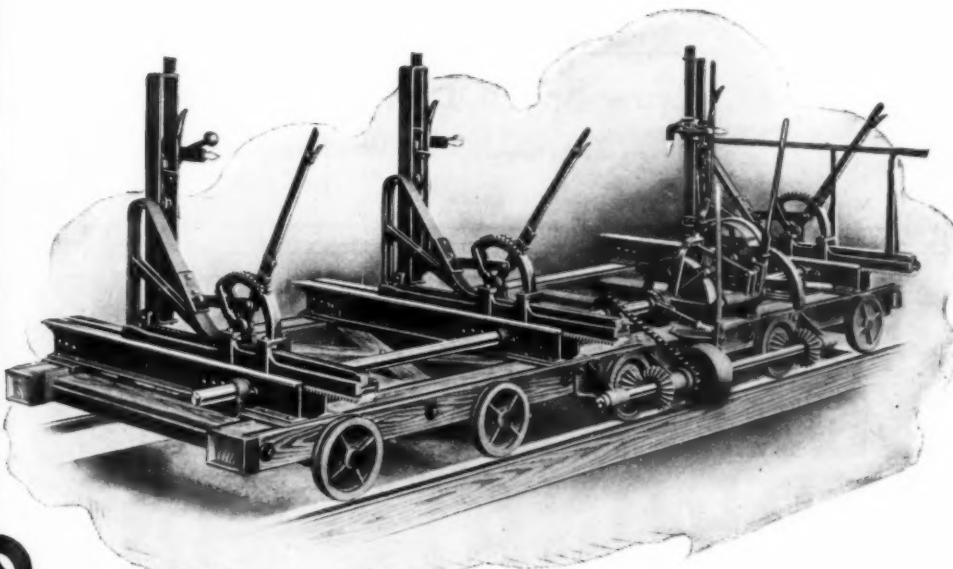
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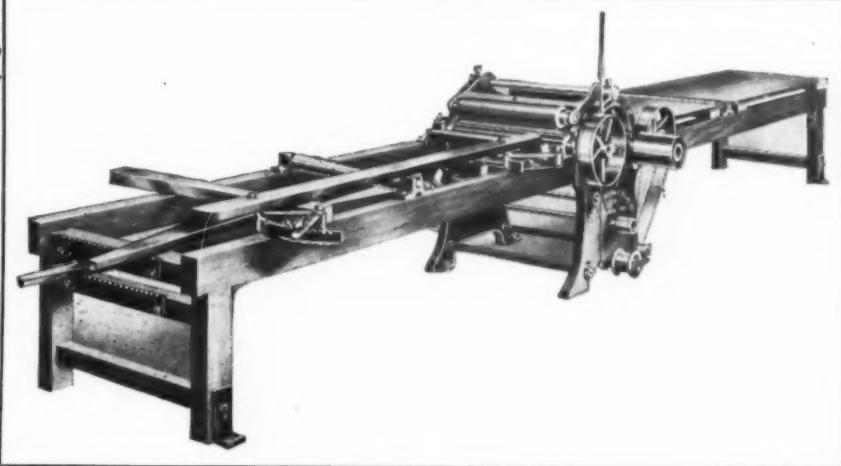
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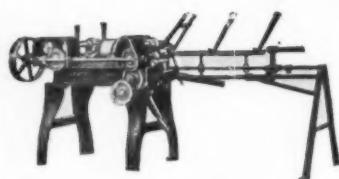
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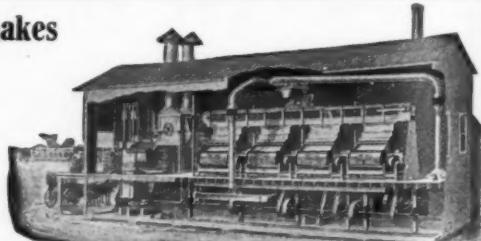
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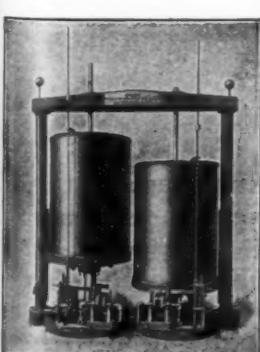
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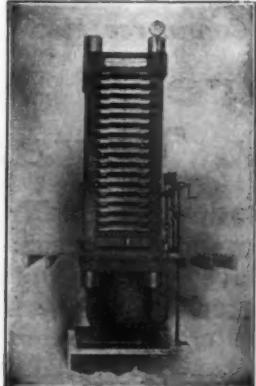
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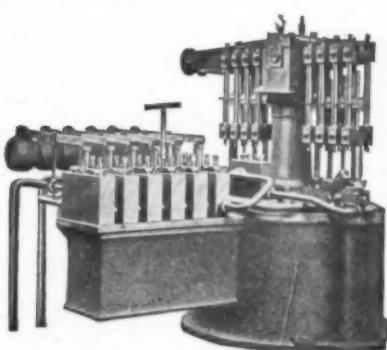
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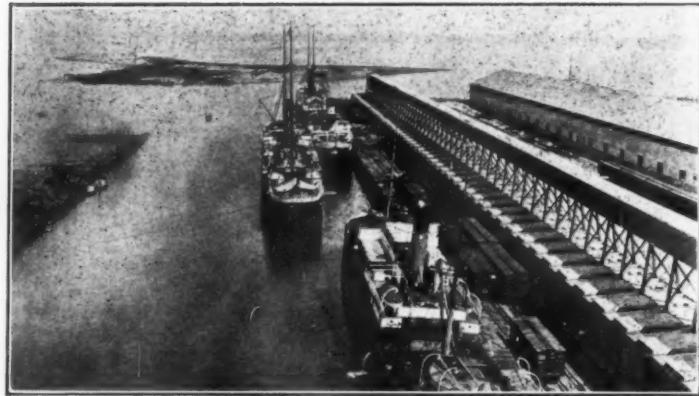
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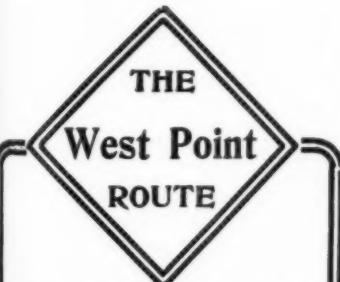
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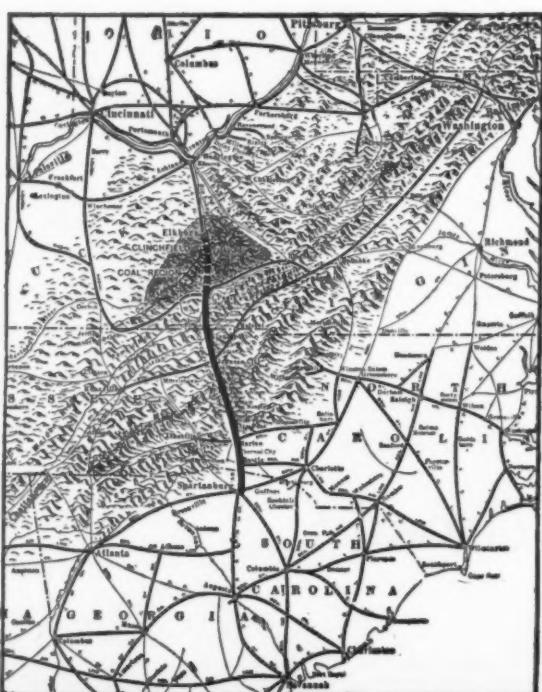
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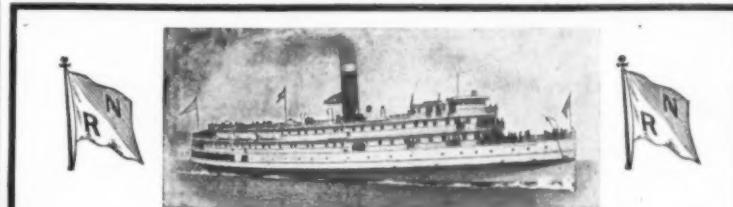
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- Bearings. (Locomotive and Car.)**
- Keystone Bronze Co., Pittsburgh, Pa.
- Bearings. (Oilless.)**
- North Amer. Metaline Co., Long Island City, N. Y.
- Bearings. (Roller.)**
- Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bells. (Call.)**
- Holtzer-Cabot Electric Co., Boston, Mass.
- Bells and Gongs.**
- National Telephone Co., Pittsburgh, Pa.
Western Electric Co., New York, N. Y.
- Beltng. (Leather, Canvas, Rubber.)**
- Amerlene Supply Co., Providence, R. I.
Bailey-Leiby Co., Charleston, S. C.
Baltimore Beltng Co., Baltimore, Md.
Cameron & Barkley Co., Charleston, S. C.
Chevrolet Beltng Co., Akron, O.
Diamond Ringbar Co., Akron, O.
Dick, Ltd., R. J., Passaic, N. J.
Druid Oak Beltng Co., Inc., The, Baltimore, Md.
Gandy Beltng Co., Baltimore, Md.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Rossendale Reddaway B. & H. Co., Newark, N. J.
Ward-Becke Co., Washington, D. C.
Williams & Sons, I. B., Dover, N. H.
- Beltng. (Chain.)**
- Bartlett & Snow Co., C. O., Cleveland, O.
Caldwell & Sons Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
- Belt Conveyors.**
- Jeffrey Mfg. Co., Columbus, O.
Robins Conveying Belt Co., New York, N. Y.
- Belt Dressing.**
- Diamond Rubber Co., Akron, O.
Gandy Beltng Co., Baltimore, Md.
- Belt Fasteners.**
- Crescent Fastener Co., New York, N. Y.
- Belt Lacing. (See Belting, Leather, Canvas, Rubber, and Supplies.)**
- Rubber Soda. (Sup Statn Lumber Dip.)
- Church & Dwight Co., New York, N. Y.
- Blackboards. (Slate.)**
- East Bangor Con. State Co., The, East Bangor, Pa.
Hower, J. R., Slatington, Pa.
Johnson, E. J., New York, N. Y.
- Block Tackle. (For Wire or Manila Rope.)**
- Patterson Co., W. W., Pittsburgh, Pa.
- Blowers and Exhaust Fans.**
- American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Clark Co., Geo. P., Windsor Locks, Conn.
De La Salle Steam Turbine Co., Trenton, N. J.
Garden City Fan Co., Schenectady, N. Y.
General Electric Co., Schenectady, N. Y.
General Furnace Co., Utica, N. Y.
Raymond Bros. Impact Prod. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Skinner Bros., St. Louis, Mo.
Standard Blower & Metal Mfg. Co., Atlanta, Ga.
Sturtevant Co., B. F., Hyde Park, Mass.
- Blueprint Apparatus.**
- Kenefel & Esser, Hoboken, N. J.
- Boilers.**
- Abschold & Root Mfg. Co., Newburgh, N. Y.
Ames Iron Works, Oswego, N. Y.
Babcock & Wilcox Co., New York, N. Y.
Brownell Co., Dayton, O.
Cameron & Barkley Co., Charleston, S. C.
Casy-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Chicago House Wrecking Co., Chicago, Ill.
Cole Mfg. Co., R. D., Newnan, Ga.
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Great City Boiler Co., Dayton, O.
Gibbs Machinery Co., Cincinnati, S. C.
Hartley Boiler Works, Mountain View, Ala.
Heine Safety Boiler Co., St. Louis, Mo.
Keeler Co., E., Williamson, Pa.
Luskout Boiler & Mfg. Co., Chattanooga, Tenn.
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Price Machinery Co., S. M., Norfolk, Va.
Schofield & Sons Co., J. S., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weinholt Boiler Co., Chattanooga, Tenn.
- Boiler Setting.**
- Harbison-Walker Refractories Co., Pittsburgh, Pa.
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- Bolts, Nuts, Rivets, Studs and Washers.**
- Lebanon Valley Iron & Steel Co., Lebanon, Pa.
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Nictown Plate Washer Co., Philadelphia, Pa.
The Republic Iron & Steel Co., Youngstown, O.
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- Bonds. (Surety, etc.)**
- Fidelity & Deposit Co., Baltimore, Md.
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- Strickland Machine Co., Richmond, Va.
- Bottling Outfits.**
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Union Iron Works, Selma, Ala.
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- [See Railroad Equipment and Supplies.]
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- Car Lighting and Heating.**
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- [See Sand-Lime Brick Machinery.]
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American Locomotive Co., New York, N. Y.

Austin Mfg. Co., Chicago, Ill.

Case Threshing Mach. Co., J. I., Racine, Wis.

Clyde Iron Works, Duluth, Minn.

Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.

Exeter Machine Works, Pittston, Pa.

Ferry Bros. Co., S., Bangor, Pa.

Haynes Bros. Co., New York, N. Y.

Ingersoll-Rand Co., New York, N. Y.

Linton, W. J., New York, N. Y.

Males Co., The, Cincinnati, O.

Marine Metal & Supply Co., New York, N. Y.

Maryland Equipment & Supply Co., Baltimore, Md.

Mead-Morrison Mfg. Co., Cambridgeport, Mass.

Milwaukee Stone Mach. Co., Hollidaysburg, Pa.

Robins Conveying Belt Co., New York, N. Y.

Smith Co., T. L., Atlanta, Ga.

Warren Equipment Co., Cincinnati, O.

Williamson Bros. Co., Philadelphia, Pa.

Conveying Machinery.

Bartlett & Snow Co., C. O., Cleveland, O.

Brown Holting Mech. Co., Cleveland, O.

Caldwell & Son Co., H. W., Chicago, Ill.

Consolidated Tramway Co., Milwaukee, Wis.

Dodge Manufacturing Co., Milwaukee, Wis.

Hayward Co., New York, N. Y.

Hill Co., C. W., West New Brighton, N. Y.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Nicetown (Philadelphia), Pa.

Mead-Morrison Mfg. Co., Cambridgeport, Mass.

Melanahan-Stone Mach. Co., Hollidaysburg, Pa.

Robins Conveying Belt Co., New York, N. Y.

Symons Bros., Milwaukee, Wis.

Universal Road Mach. Co., Kingston, N. Y.

Cooling Towers.

Algerber Condenser Co., New York, N. Y.

Wheeler Condenser & Eng. Co., New York, N. Y.

Cordage.

American Mfg. Co., New York, N. Y.

Borden & Bascom Mfg. Co., Cleveland, O.

Columbian Rope Co., Auburn, N. Y.

Plymouth Cordage Co., North Plymouth, Mass.

Turner Co., J. Spencer, New York, N. Y.

Whitlock Cordage Co., New York, N. Y.

Cordage Machinery.

Baskell-Dawes Machine Co., Boston, Mass.

Corn-Mill Machinery.

Nordyke & Marmon Co., Indianapolis, Ind.

Raymond Bros. Impact Pulv. Co., Chicago, Ill.

State Co., B. F., Baltimore, Md.

Wolf Co., Chambersburg, Pa.

Cotton Duck.

Turner Co., J. Spencer, New York, N. Y.

Cotton Oil and Products.

American Cotton Oil Co., New York, N. Y.

Cotton Yarns. (Commission Merchants)

Paslow, Linkroum & Co., New York, N. Y.

Cotton-Gin Machinery.

Carter Cotton Gin Co., East Bridgewater, Mass.

Continental Gin Co., Birmingham, Ala.

Gibbs Machinery Co., Columbia, S. C.

Van Winkle Gin & Machine Co., Atlanta, Ga.

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Whitlock Cordage Co., New York, N. Y.

Cordage Machinery.

Baskell-Dawes Machine Co., Boston, Mass.

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Engines.

OIL.
Baldredell Machinery Co., Bradford, Pa.
Bogart Gas Power Eng. Co., Buffalo, N. Y.
De La Vergne Machine Co., New York, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Metz, A., New York, N. Y.
Otto Gas Engine Works, Philadelphia, Pa.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., The, Pittsburgh, Pa.

COAL AND GASOLINE.
Allis-Chalmers Co., Milwaukee, Wis.
American Blower Co., Detroit, Mich.
American Eng. Co., Bonney Brook, N. J.
American & French & Deitch Co., St. Paul, Minn.
Atlas Iron Works, Oswego, N. Y.
Atlas Engine Works, Indianapolis, Ind.
Ball Engine Co., Erie, Pa.
Brownell Co., The, Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Cooper Co., C. & G., Mt. Vernon, O.
Dale Engine Co., Grand Haven, Mich.
Engberg's Elect. & Mech. Works, St. Joseph, Mo.
Gibbs Machinery Co., Columbus, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Griffith & Wedge Co., The, Zanesville, O.
Harrisburg Flyer & Mach. Wks., Harrisburg, Pa.
Hooven, H. W., Rentzeler Co., Hamilton, O.
Lamb & Stamps Co., Cincinnati, O.
Leffel & Co., Springfield, O.
Lombard Iron Works, Augusta, Ga.
Meeklenburg Iron Works, Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Murray Iron Works Co., Burlington, Ia.
Phoenix Iron Works Co., Mendeville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Ridgway Dynamie & Engine Co., Ridgway, Pa.
Schofield's Sons Co., J. S., Marion, Ga.
Smith Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Sturtevant Co., B. F., Hyde Park, Mass.
Union Iron Works Co., Selma, Ala.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Machine Co., Pittsburgh, Pa.

Engines. (Truck and Aeroplane.)

Black & Decker Mfg. Co., Baltimore, Md.
Envelopes.
Young & Selden Co., Baltimore, Md.
Excavating Machinery. (Steam Shovels, etc.)
American Locomotive Co., New York, N. Y.
American Steel Dredge Co., Ft. Wayne, Ind.
Baldwin Equipment & Supply Co., Chicago, Ill.
Brownell Mfg. Co., Mansfield, O.
Bucyrus Co., The, So., Milwaukee, Wis.
Cable Excavator Co., Philadelphia, Pa.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
Marion Steam Shovel Co., Marion, O.
Montgomery Machine Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
Excelsior Machinery.
Kline, Lewis T., Alpena, Mich.
Exhaust Heads.
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.
Greenwald, I. & E., Cincinnati, O.
Hopper Mfg. Co., Springfield, O.
Exhibits. (Machinery Builders' Equipment and Supplies.)
Bourse, The, Philadelphia, Pa.
Builders' Exchange, Baltimore, Md.
Expansion Joints.
Alberger Condenser Co., New York, N. Y.
Badger & Sons Co., E. B., Boston, Mass.
Factories. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]

Fans. (Electric.)
Baldy Hill Electric Co., Pittsburgh, Pa.
General Electric Co., Schenectady, N. Y.
Robbins & Myers Co., Springfield, O.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

Fastener Driving Machine. (Corrugated Joint.)
Saranac Machine Co., St. Joseph, Mich.

Feed-Water Heaters and Purifiers.

Alberger Condenser Co., New York, N. Y.
American Water Softener Co., Philadelphia, Pa.
Blake & Knowles Steam Pump Works, New York, N. Y.
Brownell Co., Dayton, O.
Exeter Machine Works, Pittston, Pa.
Gibbs Machinery Co., Columbus, S. C.
Greenwald, I. & E., Cincinnati, O.
Hopper Mfg. Co., Springfield, O.
McAdoo, Thomas, Philadelphia, Pa.
Murray Iron Works Co., Burlington, Ia.
National Pipe Bending Co., New Haven, Conn.
Seife & Sons Co., Wm. B., Pittsburgh, Pa.
Stewart Heater Co., Buffalo, N. Y.
Wilmington Iron Works, Wilmington, N. C.

Feed-Water Heater and Purifier and Oil Separator Combined.

Bake & Knowles Steam Pump Works, New York, N. Y.
Stewart Heater Co., Buffalo, N. Y.

Felt. (Building, Sheathing.)
Barrett Mfg. Co., Philadelphia, Pa.

Fencing, Entrance Gates. (Iron, Steel, Wire.)

American Steel & Wire Co., Chicago, Ill.
Baldy's Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
New Jersey Wire Cloth Co., Trenton, N. J.
Ohio Elevator & Mach. Co., The, Columbus, O.
Fertilizer Machy. (See also Phosphate Machy.)
Campbell, P. F., Philadelphia, Pa.
Pratt Eng. & Mfg. Co., Atlanta, Ga.
Smith Co., T. L., Atlanta, Ga.
Valk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
Wilmington Iron Works, Wilmington, N. C.

Gas Blowers. (Turbine.)
Terry Steam Turbine Co., New York, N. Y.

Gas Compressors.
Blaisdell Machinery Co., Bradford, Pa.
Ingersoll-Rand Co., New York, N. Y.

Files.

Barnett Co., G. & H., Philadelphia, Pa.
Delta File Works, Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
Filters. (Water, for Domestic and Industrial Purposes.)
American Water Softener Co., Philadelphia, Pa.
International Filter Co., Chicago, Ill.
Lynn-Superior Co., The, Cincinnati, O.
New York Con. Jewell Fil. Co., New York, N. Y.
Roberts Filter Mfg. Co., Philadelphia, Pa.
Seife & Sons Co., Wm. B., Pittsburgh, Pa.
Tucker & Laxton, Charlotte, N. C.

Financial Publication.

Financial Review, New York, N. Y.

Fire Alarm Boxes.

Balto, Mch. Products Co., (Relay Station P. O.), Baltimore, Md.

Fire Clay Brick. [See Brick, Fire Clay.]

Fire Box Blocks.

Ashland Fire Brick Co., Ashland, Ky.

Fire Door Fixtures.

Peters & Son, Jas., Philadelphia, Pa.
Victor Mfg. Co., Newburyport, Mass.

Fire Extinguishers.

Baldwin & Sons Co., E. B., Boston, Mass.
Gulf Fire Extinguisher Co., Providence, R. I.

Fire Escapes.

Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.

Fire Insurance.

Hartford Fire Insurance Co., Hartford, Conn.

Fireplaces. (Artistic Brick.)

Fiske & Co., Inc., New York, N. Y.

Fireproof Building Construction. (Steel.) [See Concrete Construction.]

Fireproof Building Material.

Dahlstrom Metallic Door Co., Jamestown, N. Y.

Johns-Manville Co., H. W., New York, N. Y.

Fireproof Doors and Shutters.

Dahlstrom Metallic Door Co., Jamestown, N. Y.

Klunear Mfg. Co., Columbus, O.

New Orleans Roof & Metal Co., New Orleans, La.

Richmond Safety Gate Co., Richmond, Ind.

United States Metal Products Co., New York, N. Y.

Victor Mfg. Co., Newburyport, Mass.

Fire Protection Hardware.

Peters & Son, Jas., Philadelphia, Pa.

Flanges. (Iron and Steel.)

American Cast Iron Pipe Co., Birmingham, Ala.

American Pipe & Construction Co., Phila., Pa.

American Spiral Pipe Works, Chicago, Ill.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Dart Manufacturing Co., E. M., Providence, R. I.

General Fire Extinguisher Co., Providence, R. I.

Gilmour Pipe & Foundry Co., Lynchburg, Va.

McWane Pipe Works, Lynchburg, Va.

National Tube Co., Pittsburgh, Pa.

U. S. Cast Iron Pipe & Fly Co., New York, N. Y.

Whitlock Coll Pipe Co., Hartford, Conn.

Wood & Co., R. D., Philadelphia, Pa.

Flexible Joints.

Moran Flex. Steam Jolot Co., Inc., Louisville, Ky.

Flooring. (Cement.)

Dagostin & Angelini Bros., Montgomery, Ala.

Flooring. (Hardwood, Maple, Oak.)

Carolina Portland Cement Co., Charleston, S. C.

Northcross Mantel Co., W. J., Memphis, Tenn.

Nashville Hardw' Flooring Co., Nashville, Tenn.

Flour and Grist Mill Machinery and Supplies.

Caldwell & Sons Co., H. W., Chicago, Ill.

Gilles Machinery Co., Columbia, S. C.

Nordyke & Marmon Co., Indianapolis, Ind.

Salem Foundry & Machine Works, Salem, Va.

Starr Co., B. F., Baltimore, Md.

Veatch & Co., L. R., Louisville, Ky.

Wolf Co., Chambersburg, Pa.

Flush tanks.

Merritt & Co., Camden, N. J.

Foot Valves.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Forges.

Buffalo Forge Co., Buffalo, N. Y.

Sturtevant Co., B. F., Hyde Park, Mass.

Forgings.

Great Southern Automobile Co., Birmingham, Ala.

Richmond Forgings Corporation, Richmond, Va.

Welman Chain & Iron Co., Lebanon, Pa.

Forms. (Steel Collapsible.)

Concrete Form & Engine Co., Detroit, Mich.

Foundations.

Underground Constr. Co., The, St. Louis, Mo.

Foundations. (Open or Pneumatic.)

Missouri Val. Bridge & Iron Co., Leavenw'th, Kau.

Foundry Equipment and Supplies.

Paxson Co., J. W., Philadelphia, Pa.

Frogs. [See Railroad Frogs and Switches.]

Fuel Economizer.

Green Fuel Economizer Co., Matteawan, N. Y.

Sturtevant Co., B. F., Hyde Park, Mass.

Fuel Oil.

Gulf Refining Co., Pittsburgh, Pa.

Texas Co., The, New York, N. Y.

Fuel Oil Equipment.

Petroleum Iron Works Co., Sharon, Pa.

Furnace Builders.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Fuses, Bases and Fittings.

Johns-Manville Co., H. W., New York, N. Y.

Galvanized Steel and Iron.

Baldwell-Hayward Co., Baltimore, Md.

Buffalo Forge Co., Buffalo, N. Y.

Monitor Steam Generator Mfg. Co., Balto., Md.

Peck-Hammond Co., The, Cincinnati, O.

Sturtevant Co., B. F., Hyde Park, Mass.

Gas Blowers. (Turbine.)

Terry Steam Turbine Co., New York, N. Y.

Gas Compressors.

Blaisdell Machinery Co., Bradford, Pa.

Ingersoll-Rand Co., New York, N. Y.

Gas Furnaces.

Blaisdell Machinery Co., Bradford, Pa.

Ingersoll-Rand Co., New York, N. Y.

Gas Generators.

Blaisdell Machinery Co., Bradford, Pa.

Ingersoll-Rand Co., New York, N. Y.

Gas Engines. [See Engines, Gas.]

Gas Holders.

Bartlett-Hayward Co., The, Baltimore, Md.

Chicago Bridge & Iron Wks., Chicago, Ill.

Gas Machines.

Economy Gas Mach. Co., Rochester, N. Y.

Gas Plants.

Western Gas Construction Co., Ft. Wayne, Ind.

Gas Plants and Benches.

Improved Equipment Co., New York, N. Y.

Gas Plants. (Coal and Water.)

Bartlett-Hayward Co., The, Baltimore, Md.

Gas Producers.

Bogart Gas Power Eng. Co., Buffalo, N. Y.

De La Vergne Machine Co., New York, N. Y.

Orto Gas Engine Works, Philadelphia, Pa.

Standard Gas Power Co., Atlanta, Ga.

Westinghouse Machine Co., Pittsburgh, Pa.

Wood & Co., R. D., Philadelphia, Pa.

Gasoline and Kerosene.

Gulf Refining Co., Pittsburgh, Pa.

Texas Co., The, New York, N. Y.

Gas and Steam Fitters' Tools.

Saunders' Sons, D., Yonkers, N. Y.

Gaskets. (Rubber.)

N. J. Car Spring & Rubber Co., Jersey City, N. J.

Gears.

Caldwell Co., Inc., W. E., Louisville, Ky.

Caldwell & Son Co., H. W., Chicago, Ill.

Cresson Co., Geo. V., Philadelphia, Pa.

Dayton Globe Iron Works Co., Dayton, O.

Dodge Manufacturing Co., Mishawaka, Ind.

Great Gear & Machine Co., The, Birmingham, Pa.

Great Southern Automobile Co., Birmingham, Ala.

Jenks Mfg. Co., Columbus, O.

Jeffrey Mfg. Co., Co., Columbus, O.

Goulds Mfg. Co., Seneca Falls, N. Y.

Myers & Bro., F. E., Ashland, O.

Wood & Co., R. D., Philadelphia, Pa.

Hydraulic Motors.

American Spiral Pipe Works, Chicago, Ill.

Hydraulic Rams.

Goulds Mfg. Co., Seneca Falls, N. Y.

Hose.

Eureka Fire Hose Mfg. Co., New York, N. Y.

N. J. Car Spring & Rubber Co., Jersey City, N. J.

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Belle & Wilson, Roanoke, Va.
Clark & Co., J. Lindsey, Baltimore, Md.
Clark & Co., Albert, Brunswick, Ga.
Batchelor, H. B., Washington, D. C.
Kingsborough & Co., J. T., Atlanta, Ga.
Wright & Co., Abbott, Norfolk, Va.
Yocom & Co., S. L., Norfolk, Va.
Robertson, W. W., Norfolk, Va.

Lath. (Expanded Metal.)

Carolina Portland Cement Co., Charleston, S. C.
Milwaukee Corrugating Co., Milwaukee, Wis.
Lathes. (Engine.)
Greaves, Kusman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Mch. Tool Co., Dayton, O.

Lawn Furniture.

Biles Iron & Wire Works, J. E., Detroit, Mich.
Biles & Co., Baltimore, Md.
Burt, Baggott & Co., Baltimore, Md.

Leadite.

Leadite Co., The, Philadelphia, Pa.
Lighting Equipment.

Hopkiss Co., Newark, O.

Lime.

Carolina Portland Cement Co., Charleston, S. C.
Sentry Cement & Lime Co., Baltimore, Md.
Western Portland Cement Co., Charleston, S. C.
Western Portland Cement Co., Baltimore, Md.

Lime. (Hydrated.)

Sentry Cement & Lime Co., Baltimore, Md.

Western Portland Cement Co., Baltimore, Md.

Lime Kilns and Equipment.

Improved Equipment Co., New York, N. Y.

Limestone Products.

Sentry Cement & Lime Co., Baltimore, Md.

Liquor Filters.

International Filter Co., Chicago, Ill.

Lithographers, Engravers.

Teng & Selden Co., Baltimore, Md.

Lockers. (Metal.)

Keighley Metal Ceiling Mfg. Co., S., Pittsburgh, Pa.

Locomotives.

INDUSTRIAL.

American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Beyer Machine Co., John F., Ravenna, O.
Climax Mfg. Co., Corry, Pa.
Davenport Locomotive Works, Davenport, Ia.
Edwards Mfg. Co., Columbus, O.
Lima Locomotive & Machine Co., Lima, O.
Miles Co., Cincinnati, O.
Porter Co., H. K., Pittsburgh, Pa.
Vulcan Iron Works, Wilkes-Barre, Pa.

RAILWAY.

American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Lima Locomotive & Machine Co., Lima, O.
Miles Co., Cincinnati, O.
Vulcan Supply Co., Norfolk, Va.

Looms and Weaving Machinery.

Impey Co., Hopedale, Mass.
Mass Machine Works, Taunton, Mass.

Lumber.

Industrial Lumber Co., Elizabeth, Ia.
Vance & Felton Lumber Co., Macon, Ga.

Lumber. (Heavy Construction, Pitch Pine, etc.)

Mase & Felton Lumber Co., Macon, Ga.
National Lumber & Creosot Co., Texarkana, Ark.
Saylor & Co., S. E., Gulfport, Miss.

Lumber. (Yellow Pine.)

Industrial Lumber Co., Elizabeth, Ia.

Lumber Buggies.

Bale Steam Feed Works, Meridian, Miss.

Lumber Stackers.

Bale Steam Feed Works, Meridian, Miss.

Machinery. (Special.)

Black & Decker Mfg. Co., Baltimore, Md.
Bissell Co., E. W., Brooklyn, N. Y.

Bissell, Lewis T., Alpena, Mich.

Bissell & Co., Charles, Brooklyn, N. Y.
Bogart Bros., Impact Pulp Co., Chicago, Ill.
Bogart Bros., Fdry. & Mach. Wks., Royersford, Pa.

Bratton & Bragg Co., Petersburgh, Va.

Universal Telegraphic Co., Baltimore, Md.

Machinery and Supplies. (New and Second-hand Bargains.)

Baltin, Iron, Steel & Metal Co., Baltimore, Md.

Baltin, Metal Mfg. & Supply Co., Baltimore, Md.

Boston Iron & Metal Co., Baltimore, Md.

Chicago House Wrecking Co., Chicago, Ill.

Cleveland Belting & Machine Co., Cleveland, O.

Dinner Railway Equipment Co., Chicago, Ill.

Dugay & Son, New York, N. Y.

Harine Metal & Supply Co., New York, N. Y.

Hoffman & Co., Metal Co., St. Louis, Mo.

Kostal, J., Philadelphia, Pa.

Fremont Engineering Co., Chicago, Ill.

Pickard, H. W., Philadelphia, Pa.

Pittsburgh Mfg. & Equip. Co., Pittsburgh, Pa.

Preston Tires & Supply Co., New York, N. Y.

Soddy Machinery Co., Cincinnati, O.

St. Co., Howard W., Philadelphia, Pa.

Stearns Machinery Co., New York, N. Y.

Samuel, Frank, Philadelphia, Pa.

Seydel's Sons, Inc., Philadelphia, Pa.

Southern Supply Co., Norfolk, Va.

Tampa Machinery Exchange, Tampa, Fla.

Thompson, Jr., Co., Jos. H., New York, N. Y.

Tucker, Frank, Philadelphia, Pa.

Yarber, Thomas, Philadelphia, Pa.

Machine Tools.

Greaves, Kusman & Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., New York, N. Y.

Miami Valley Mch. Tool Co., Dayton, O.

Machinists. (Engineers.)

American Mch. & Mfg. Co., Charlotte, N. C.

Bonoke Iron Works, Inc., Roanoke, Va.

Stewart & Bragg Co., Petersburgh, Va.

Magnesia Materials.

Johns-Manville Co., H. W., New York, N. Y.

Magnesite. (Dead Burned.)

Baldwin-Walker Refractories Co., Pittsburgh, Pa.

Magnets. (Electric Lift.)

Brown Engineering Co., Cleveland, O.

Mails.

Bell & Wilson, Roanoke, Va.

Mails.

Carolina Portland Cement Co., Charleston, S. C.

Milwaukee Corrugating Co., Milwaukee, Wis.

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Carolina Portland Cement Co., Charleston, S. C.

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Carolina Portland Cement Co., Charleston, S. C.

Milwaukee Corrugating Co., Milwaukee, Wis.

Mails.

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Protector Steel. (Concrete Curb, Steps, etc.)
Steel Protected Concrete Co., Philadelphia, Pa.

Pulleys. (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Sinclair-Scott Co., Baltimore, Md.
Woods' Sons Co., T. B., Chambersburg, Pa.

STEEL SPLIT.

American Pulley Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.

WOOD SPLIT.

Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Lane Mfg. Co., Montpelier, Vt.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Machine Works, Salem, Va.

Pulleys, Shafting and Hangers.

Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nilesboro (Philadelphia), Pa.
Nordyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Standard Roller Bearing Co., Philadelphia, Pa.
Woods' Sons Co., T. B., Chambersburg, Pa.

Pumps. (Centrifugal.)

Alberger Pump Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Erico Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Wheeler Condenser & Eng. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.

Pumps. (Hydraulic.)

Buffalo Steam Pump Co., Buffalo, N. Y.
Cardwell Machine Co., Richmond, Va.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Emerson Steam Pump Co., Alexandria, Va.
Erico Pump & Engine Wks., Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Worthington, H. R., New York, N. Y.

Pumps. (Lift and Force.)

Goulds Mfg. Co., Seneca Falls, N. Y.
Ingersoll-Rand Co., New York, N. Y.

Pumps. (Pneumatic.)

Ingersoll-Rand Co., New York, N. Y.

Pumps. (Power Boiler Feed.)

Alberger Pump Co., New York, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., New York, N. Y.

Pumps. (Rotary.)

Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Steam.)

Blakeslee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cooke Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Gilbert Machinery Co., Columbia, S. C.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Bentzeler Co., Hamilton, O.
Keystone Pump & Well Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Murray Iron Works Co., Burlington, Ia.
Price Machinery Co., S. M., Norfolk, Va.
Syndor Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.
Worthington, H. R., New York, N. Y.

Pumps. (Trough.)

C. H. & E. Mfg. Co., Milwaukee, Wis.
Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Vacuum.)

Alberger Pump Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
Smith Co., T. L., Atlanta, Ga.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.

Pumping Machinery.

Allis-Chalmers Co., Milwaukee, Wis.
Bentzeler Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
C. H. & E. Mfg. Co., Milwaukee, Wis.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Deming Co., Salem, O.
Erico Pump & Engine Works, Erie, Pa.
Faribanks, Morse & Co., Chicago, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Bentzeler Co., Hamilton, O.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinsville, N. Y.
Myers & Bros., F. E., Ashland, O.
Purser, J. R., Charlotte, N. C.
Rydor Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.

Punching and Shearing Machinery.

Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Boyersford Foundry & Mach. Co., Royersford, Pa.

Pyrites Burners.

Pratt Engineering & Mach. Co., Atlanta, Ga.
Quarrying and Stonecutting Machinery.

Ingersoll-Rand Co., New York, N. Y.

Railings, Grilles, etc. (Brass.)

McKenna Bros. Brass Co., Pittsburgh, Pa.

Railroads. (Agricultural and Industrial Opportunities.) [See Industrial, Agricultural and Commercial Opportunities.]

Railroads. (Passenger Department.)
Illinois Central Railroad, Chicago, Ill.

Refractories.

Armitage Mfg. Co., Richmond, Va.

Railroad Equipment and Supplies. (New and Second-hand.)

American Frog & Switch Co., Hamilton, O.

American Locomotive Co., New York, N. Y.

American Valve & Meter Co., Cincinnati, O.

Bailey-Leamy Co., The, Charleston, S. C.

Baldwin Equipment & Supply Co., Chicago, Ill.

Birmingham Rail & Loco. Co., Birmingham, Ala.

Brownson & Metal Co., Baltimore, Md.

Cincinnati Frog & Switch Co., Cincinnati, O.

Foster Co., L. B., Pittsburgh, Pa.

Georgia Car & Locomotive Co., Atlanta, Ga.

Hoffman & Co., R. C., Baltimore, Md.

Indiana Steel & Iron Co., Pittsburgh, Pa.

Kilby Frog & Switch Co., Birmingham, Ala.

Macleary, J. H., Suffolk, Va.

Males Co., Cincinnati, O.

Manning, Maxwell & Moore, Inc., New York, N. Y.

Maryland Equipment & Supply Co., Baltimore, Md.

Mathes Iron & Metal Co., G. St. Louis, Mo.

May & Turner Co., Atlanta, Ga.

Newhall Eng. Co., Geo. M., Philadelphia, Pa.

Pickett, H. W., Philadelphia, Pa.

Robins Co., E. W., Philadelphia, Pa.

Robinson & Orr, Pittsburgh, Pa.

Sherwood, E. C., New York, N. Y.

Southern Iron & Equipment Co., Atlanta, Ga.

Steel Rail Supply Co., The, New York, N. Y.

United States Rail Co., Cumberland, Md.

Vulcan Iron Works, Wilkes-Barre, Pa.

Warner Equipment Co., Cincinnati, O.

Welt Frog Co., Cincinnati, O.

West Virginia Rail Co., The, Huntington, W. Va.

Wilson & Co., E. H., Philadelphia, Pa.

Wright Corrugating Co., Walter A., St. Louis, Mo.

Zelnicker Supply Co., Walter A., St. Louis, Mo.

Rails. (Steel.)

Baldwin Equipment & Supply Co., Chicago, Ill.

Carnegie Steel Co., Pittsburgh, Pa.

Foster Co., L. B., Pittsburgh, Pa.

Heckler, J. E., Atlanta, Ga.

Hoffman & Co., R. C., Baltimore, Md.

Hunt Co., C. W., West New Brighton, N. Y.

Hyde Bros. & Co., Pittsburgh, Pa.

Indiana Steel & Iron Co., Pittsburgh, Pa.

Lewis & Co., Henry, Philadelphia, Pa.

Robins Co., E. W., Philadelphia, Pa.

Sherwood, E. C., New York, N. Y.

Southern Iron & Equipment Co., Atlanta, Ga.

Steel Rail Supply Co., The, New York, N. Y.

United States Rail Co., Cumberland, Md.

West Virginia Rail Co., The, Huntington, W. Va.

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United States Rail Co., Cumberland, Md.

West Virginia Rail Co., The, Huntington, W. Va.

Wilson & Co., E. H., Philadelphia, Pa.

Wright Corrugating Co., Walter A., St. Louis, Mo.

Zelnicker Supply Co., Walter A., St. Louis, Mo.

Railways. (Industrial.)

Chase Flyer & Mfg. Co., Columbus, O.

Hunt Co., C. W., West New Brighton, N. Y.

Link-Belt Co., Nilesboro (Philadelphia), Pa.

Rams. (Hydraulic.)

Reamers.

Morse Twist Drill & Mch. Co., New Bedford, Mass.

Reflectors.

Holophane Co., Newark, O.

Refrigerating Machinery and Supplies.

American Hulm Packing Co., New York, N. Y.

Reinforcing Bars.

Carnegie Steel Co., Pittsburgh, Pa.

Concrete Steel Co., New York, N. Y.

Concrete Steel Engineering Co., New York, N. Y.

Franklin Steel Co., Franklin, Pa.

Repairing. (Armatures and Elec. App.)

Nashville Armature Works, Nashville, Tenn.

Repairing. (Power Plants.)

Strickland Mch. Co., Richmond, Va.

Riveters. (Pneumatic.)

Chicago Pneumatic Tool Co., Chicago, Ill.

Independent Pneumatic Tool Co., Chicago, Ill.

Ingersoll-Rand Co., New York, N. Y.

Road Machinery.

Anat-Western Co., Ltd., The, Chicago, Ill.

Buffalo Steel Roller Co., Buffalo, N. Y.

Case Threading Mach. Co., J. L. Racine, Wis.

Iroquois Iron Works, Buffalo, N. Y.

Kelly Springfield Road Roller Co., Springfield, O.

Universal Road Mch. Co., Kingston, N. Y.

Roadmaking Materials.

Bailey-Ashphalt Paving Co., Philadelphia, Pa.

Standard Oil Co., Inc., Road Oil Dept.

Texas Co., The, New York, N. Y.

Road Plows.

Case Threading Mch. Co., J. L. Racine, Wis.

Syracuse Chilled Plow Co., Syracuse, N. Y.

Road Preservative.

Gulf Refining Co., Pittsburgh, Pa.

Standard Oil Co., Inc., Road Oil Dept.

Texas Co., The, New York, N. Y.

Rock Crushers. (See Crushers, Rock.)

Roll Grinding and Corrugating. (Flour Mills.)

Veatch & Co., L. R., Louisville, Ky.

Rolled Metal Shapes. (For Building Material Manufacturers.)

United States Metal Products Co., New York, N. Y.

Rolls. (Bending and Straightening.)

Bertsch & Co., Cambridge City, Ind.

Roofers' and Tanners' Supplies.

Merchant & Evans Co., Philadelphia, Pa.

Roofing. (Contractors for Laying.)

Dinlaco & Bro., A., Pittsburgh, Pa.

Roofing. (Felt, Tar, Asbestos, Asphalt, Tin, etc.)

Allen, Herbert F. L., Washington, D. C.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Armitage Mfg. Co., Richmond, Va.

Barber Asphalt Paving Co., Philadelphia, Pa.

Burnett, S. W., East Walpole, Mass.

Cameron & Barkley Co., Charleston, S. C.

Carolina Portland Cement Co., Charleston, S. C.

Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.

Johns-Manville Co., H. W., New York, N. Y.

National Roofing Co., Tonawanda, N. Y.

Standard Paint Co., New York, N. Y.

Warren-Ehret Co., Philadelphia, Pa.

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Barana Machine Co., St. Joseph, Mich.
Stationers. (Envelopes, Letter and Bill Heads, etc.)
Franklin Press Co., Petersburg, Va.
Young & Seiden Co., Baltimore, Md.
Steam Feeds.
Salem Steam Feed Works, Meridian, Miss.
Steam Fitters' Supplies.
General Fire Extinguisher Co., Providence, R. I.
Saunders' Sons, D., Yonkers, N. Y.
Steam Heating.
General Fire Extinguisher Co., Providence, R. I.
Eccle Co., E., Williamsport, Pa.
Peck-Hammond Co., The, Cincinnati, O.
Steamship Lines.
Baltimore Steam Packet Co., Baltimore, Md.
Capehose Steamship Co., Baltimore, Md.
Merchant & Miners' Trans. Co., Baltimore, Md.
Steam Separators.
Goppe Mfg. Co., Springfield, O.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
Steam Shovel Chains.
Welman Chain & Iron Co., Lebanon, Pa.
Steam Shovels. [See Excavating Machinery.]
Steam Shovels. (Revolving.)
Browning Engineering Co., Cleveland, O.
Steam Specialties.
Powell Co., Wm., Cincinnati, O.
Purser, J. R., Charlotte, N. C.
Steam Traps.
American Boiler Co., Detroit, Mich.
Jenkins Bros., New York, N. Y.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
Steel.
American Rolling Mill Co., Middletown, O.
Field & Co., Inc., Philadelphia, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birn'g'h'm, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Steels. (Tool.)
Field & Co., Inc., Philadelphia, Pa.
Jewett Sons Steel Sales Co., Wm., St. Louis, Mo.
Steel. (Vanadium.)
Carnegie Steel Co., Pittsburgh, Pa.
Steel Buildings. (Designers, Builders.)
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Bartlett-Hayward Co., The, Baltimore, Md.
Capehose Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Farris Bridge Co., Pittsburgh, Pa.
Missouri Valley Bridge & Iron Co., Leavenworth, Kans.
Phoenix Iron Co., Philadelphia, Pa.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Roanoke Bridge Co., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Sead Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
Steel Casting.
Crucible Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Elliott Steel Casting Co., Pittsburgh, Pa.
Elliott Steel Casting Co., Newark, N. J.
Steel Plate Work.
Bartlett-Hayward Co., The, Baltimore, Md.
Case-Hedges Co., Chattanooga, Tenn.
Chattanooga Boller & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Steel Protector. (Concrete Curb Steps, etc.)
[See Protector Steel.]
Steel Sheet Piling.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Steering Gears. (Steamboat.)
Duke Engine Co., Grand Haven, Mich.
Stencils.
Baltimore Office Supply Co., Baltimore, Md.
Dale Seal & Stamp Co., Atlanta, Ga.
Stirrups. (Building.)
Capehose Iron Works, Baltimore, Md.
Stock Certificates, Bonds and Seals.
Baltimore Office Supply Co., Baltimore, Md.
Dale Seal & Stamp Co., Atlanta, Ga.
Stokers. (Mechanical.)
Babcock & Wilcox Co., New York, N. Y.
Harrisburg Fly & Mach. Works, Harrisburg, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
Storage Batteries.
Electric Storage Battery Co., The, Philadelphia, Pa.
Lee Electric Co., Baltimore, Md.
Westinghouse Machine Co., Pittsburgh, Pa.
Strainers.
Aeron Steam Pump Wks., A. S., New York, N. Y.
Structural Steel and Iron.
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Bartlett-Hayward Co., The, Baltimore, Md.
Belmont Iron Works, Inc., Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Capehose Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cincinnati Iron & Steel Co., Cincinnati, O.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Missouri Valley Bridge & Iron Co., Leavenworth, Kans.
Owego Bridge Co., Owego, N. Y.
Phoenix Iron Co., Philadelphia, Pa.
Repulse Iron & Steel Co., Youngstown, O.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Roanoke Bridge Co., Roanoke, Va.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Sead Architectural Iron Works, Louisville, Ky.
Tennessee Coal, Iron & R. R. Co., Birn'g'h'm, Ala.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
Stump Pullers.
Zimmerman Steel Co., M. R., Lone Tree, Ia.
Sugar-Mill Machinery.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Sulphur.
Union Sulphur Co., New York, N. Y.
Super-Heaters. (Steam.)
Babcock & Wilcox Co., New York, N. Y.
Power Specialty Co., New York, N. Y.
Surveying Instruments.
Keuffel & Esser, Hoboken, N. J.
Weber & Co., E., Philadelphia, Pa.
Switchboards, Switches, etc.
Doubleday-Hill Electric Co., Pittsburgh, Pa.
Englehart's Elec. & Mech. Works, St. Joseph, Mo.
Fort Wayne Electric Works, Atlanta, Ga.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
Switches. [See Railroad Frogs and Switches.]
Switchstands.
American Valve & Meter Co., Cincinnati, O.
Weir Frog Co., Cincinnati, O.
Tachometers. (Electric.)
Electric Speedometer Co., Washington, D. C.
Tackle Blocks. (For Wire or Manila Rope.)
Patterson Co., W. W., Pittsburgh, Pa.
Tags.
Dennison Mfg. Co., Boston, Mass.
Tanks. (Iron and Steel.)
American Water Softener Co., Philadelphia, Pa.
Bartlett-Hayward Co., The, Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
Case Thressing Mch. Co., J. L., Racine, Wis.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boller & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cole Mfg. Co., R. D., Newnan, Ga.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Gem City Boiler Co., Dayton, O.
Harry Bros. Co., Dallas, Tex.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Kennebunk Corp., Chicago Heights, Ill.
Lombard Iron Works, Augusta, Ga.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Pittsburgh Iron Works Co., Wm., Pa.
Ritter Conley Mfg. Co., Pittsburgh, Pa.
Seufle & Sons Co., Wm., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Syndor Pump & Well Co., Richmond, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Machine Co., Pittsburgh, Pa.
Tanks. (Wood.)
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Syndor Pump & Well Co., Richmond, Va.
Tapes. (Measuring.)
Keffel & Esser, Hoboken, N. J.
Lufkin Rule Co., Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
Telephones. (Supplies, Equipment.)
Doubleday-Hill Electric Co., Pittsburgh, Pa.
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.
Telephone Cable.
Intern'l Creo. & Constr. Co., Galveston, Tex.
Western Electric Co., New York, N. Y.
Telephone Poles. [See Crossties.]
Western Electric Co., New York, N. Y.
Tiles. (Drain, Floor, etc.)
Dagostino & Angelini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
Tin and Terne Plates.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.
Tobacco Machinery.
Buckeye Iron & Brass Works, Dayton, O.
Cardwell Machine Co., Richmond, Va.
Tool Steels.
Jesup's Sons Steel Sales Co., Wm., St. Louis, Mo.
Tools. (Machinists').
Manning, Maxwell & Moore, Inc., New York, N. Y.
Morse Twist Drill & Mch. Co., New Bedford, Mass.
Tools. (Mechanical.)
Starrett Co., L. S., Athol, Mass.
Tools. (Pneumatic.)
American Compressor & Pump Co., Baltimore, Md.
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Torches.
Wall Mfg. Supply Co., P., Allegheny, Pa.
Towers. (Steel and Wood.)
Baltimore Cooperage Co., Baltimore, Md.
Caldwell & Co., Inc., Wm. E., Louisville, Ky.
Chattanooga Boller & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Missouri Valley Bridge & Iron Co., Leavenworth, Kans.
Owego Bridge Co., Owego, N. Y.
Phoenix Iron Co., Philadelphia, Pa.
Repulse Iron & Steel Co., Youngstown, O.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Roanoke Bridge Co., Roanoke, Va.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Sead Architectural Iron Works, Louisville, Ky.
Tennessee Coal, Iron & R. R. Co., Birn'g'h'm, Ala.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
Tramway. (Overhead.)
Consolidated Tramway Co., Roanoke, Va.
Northern Engineering Works, Detroit, Mich.
Spedel, J. G., Reading, Pa.
Tramway. (Wire Rope.)
Broderick & Bascom Rope Co., St. Louis, Mo.
Consolidated Tramway Co., Roanoke, Va.
Caldwell & Sons Co., H. W., Chicago, Ill.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Transformers.
Crocker-Wheeler Co., Ampere, N. J.
Moloney Electric Co., St. Louis, Mo.
Triumph Electric Co., Cincinnati, O.
Trench Excavator.
American Steel Dredge Co., Ft. Wayne, Ind.
Fairbanks Steam Shovel Co., Marlon, O.
Montgomery Machine Co., Chicago, Ill.
Trucks. (Motor.)
Kelly Motor Truck Co., Springfield, O.
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Chase Flyr. & Mfg. Co., Columbus, O.
Clark Co., Geo. P., Windsor Locks, Conn.
Howe Scale & Mfg. Co., New York, N. Y.
Rome Scale & Mfg. Co., Rome, Ga.
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Westinghouse Machine Co., Pittsburgh, Pa.
Trucks. (Wood and Steel for Portable Machinery.)
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Empire Manufacturing Co., Quincy, Ill.
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Cincinnati Iron & Steel Co., Cincinnati, O.
National Tube Co., Pittsburgh, Pa.
Tubing.
Field & Co., Inc., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
Turbines. (Hydraulic.)
Allis-Chalmers Co., Milwaukee, Wis.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Ft. Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Southward Flyr. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Machine Co., Pittsburgh, Pa.
Turbines. (Steam.)
Allis-Chalmers Co., Milwaukee, Wis.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Ft. Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Southward Flyr. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Machine Co., Pittsburgh, Pa.
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Wheeler Condenser & Eng. Co., New York, N. Y.
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Virginia Bridge & Iron Co., Roanoke, Va.
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Haskell-Dawes Machine Co., Boston, Mass.
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Valves.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
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Glanorgan Pipe & Foundry Co., Lynchburg, Va.
Jenkins Bros., New York, N. Y.
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Powell Co., Wm., Cincinnati, O.
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Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
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Ads. marked * appear every other week.
Ads. marked † appear in first issue of
the month.
Ads. marked ‡ not in this issue.

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American Stone Co.	83	Georgia & Lo. & Co.	98	General Fireproofing Co.	1	Lookout Bay Iron Mfg. Co.	10	Trotter & Alexander.	1	Trotter & Alexander.	1
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Ball Engine Co.	5	Crossley Steel Casting Co.	100	Holmes, Geo. W.	22	Medina Irrigation Co.	25	Vulcan Iron Wks., Chicago, Ill.	12	Vulcan Iron Wks., Chicago, Ill.	12
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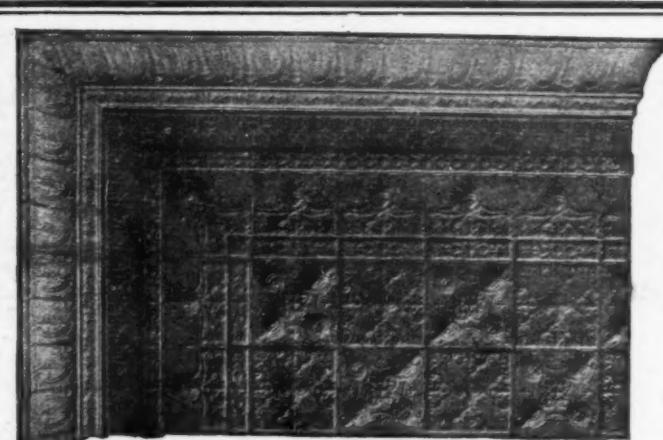


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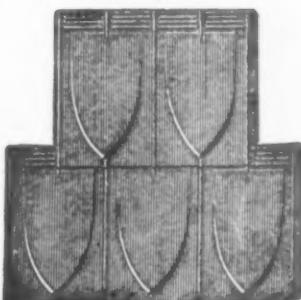
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